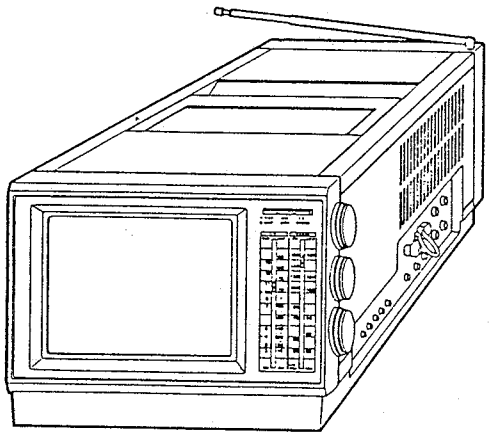
Service Manual

COLOR TELEVISION RECEIVER

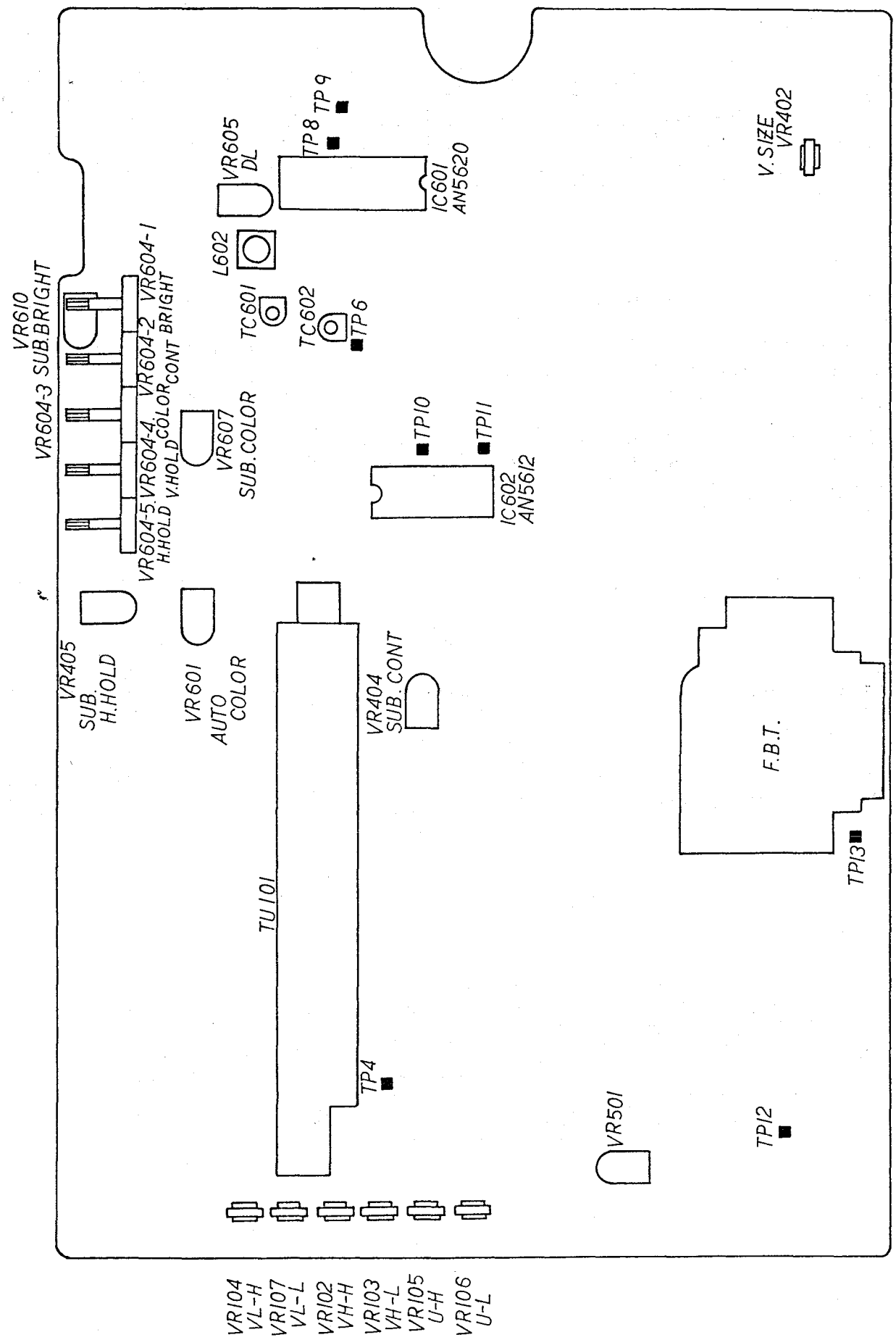
ORION

MODEL CTV-5X



Specifications are subject to change without notice.

CHASSIS LAYOUT



ALIGNMENT INSTRUCTIONS

RADIO ADJUSTMENT

AM IF ADJUSTMENT

1. Connect the hot side of the input cable from the AM IF sweep marker generator scope to TP1103 and the ground lead to a known ground.
2. Connect the hot side of the output cable from the AM IF sweep marker generator scope to TP1105 and the ground lead to known ground..
3. Align the coil L1106 until the peak of the waveform indicates 455kHz Marker in the AM IF sweep marker generator scope. (Refer to Fig. 1)

FM IF ADJUSTMENT

1. Connect the hot side of the input cable from the FM IF sweep marker generator scope to TP1103 and the ground lead to a known ground.
2. Connect the hot side of the output cable from the FM IF sweep marker generator scope to TP1101 and the ground lead to a known ground.
3. Unscrew the core until the end but the core must not be separated from the L1107.
4. Adjust the waveform as shown in Fig. 2 with L1102.
5. Let the waveform appear as shown in the right picture with L1107 and then adjust it to be symmetrical with a 10.7MHz center line. (Refer to Fig. 3)

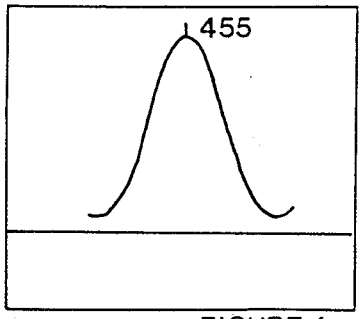


FIGURE 1.

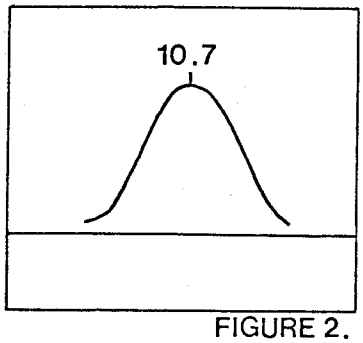


FIGURE 2.

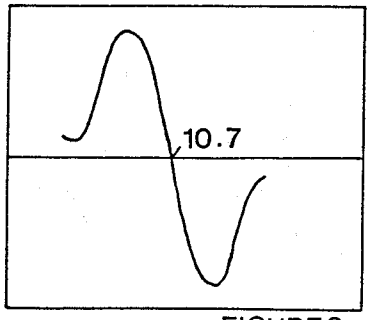


FIGURE 3.

AM COVERAGE ADJUSTMENT

1. Connect the oscilloscope and the VTVM to the earphone jack.
2. Feed 515 KHz signal from AM signal generator through a loop antenna.
3. Turn the radio tuning knob fully counter clockwise.
   Then adjust L1105 to receive the 515 KHz signal from the generator.
4. Set the generator frequency to 1650 KHz. Turn the radio tuning knob fully clockwise direction.
   Adjust TC1101-4 of PVC1101 to this 1650 KHz signal.
5. Repeat the above step 2 through 4 few times.

ALIGNMENT INSTRUCTIONS

AM TRACKING ADJUSTMENT

1. Connect the oscilloscope and the VTVM to the earphone jack.
2. Feed 600 KHz signal from AM signal generator through a loop antenna.
3. Turn the radio tuning knob counter clockwise then receive the 600 KHz signal from the generator.
   Adjust L1104 for maximum output with adjustment tool.
4. Set the generator frequency to 1400 KHz. Turn the radio tuning knob clockwise then receive the 1400 KHz signal from the generator.
   Adjust TC1101-3 of PVC1101 for maximum output.
5. Repeat the above step 2 through 4 few times.

FM COVERAGE ADJUSTMENT

1. Connect the oscilloscope and the VTVM to the earphone jack.
2. Feed 87.5 MHz signal from FM signal generator.
3. Turn the radio tuning knob fully counter clockwise.
   Then adjust L1103 to receive the 87.5 MHz signal from the generator.
4. Set the generator frequency to 108 MHz. Turn the radio tuning knob fully clockwise direction.
   Adjust TC1101-2 of PVC1101 to this 108 MHz signal.
5. Repeat the above step 2 through 4 few times.

FM TRACKING ADJUSTMENT

1. Connect the oscilloscope and the VTVM to the earphone jack.
2. Feed 90 MHz signal from FM signal generator.
3. Turn the radio tuning knob counter clockwise then receive the 90 MHz signal from the generator.
   Adjust L1101 elastically for maximum output.
4. Set the generator frequency to 106 MHz. Turn the radio tuning knob clockwise then receive the 106 MHz signal from the generator.
   Adjust TC1101-1 of PVC1101 for maximum output.
5. Repeat the above step 2 through 4 few times.

TV ADJUSTMENT

SHUTDOWN CIRCUIT

When the high voltage rises, simultaneous voltage increase will develope at terminal 3 of the Horizontal Output Transformer (FB401), and then applied to pin 4 of IC401. If excessive high voltage is produced, the increased voltage developed exceeds the rating of zener diode D406 causing the Horizontal Oscillator to stop functioning and the high voltage system is then shut down.

10.8V ADJUSTMENT

1. Feed DC 15V to F501 from DC Supplier.
2. Set the Brightness and Contrast controls to maximum position to receive free-run.
3. Connect the degital voltmeter between TP13.
4. Adjust the degital voltmeter to 10.8V with VR501.

ALIGNMENT INSTRUCTIONS

VERTICAL SIZE ADJUSTMENT

Adjust the control (VR402) so that the picture spreads fully opening from top to bottom and is proportionate to the width.

FOCUS ADJUSTMENT

Adjust the focus control, on the flyback transformer, for fine picture.

SUB H-HOLD ADJUSTMENT

1. Receive the snowy station (free run).
2. Connect Frequency Counter to CRT heater.
3. Rotate the H-Hold control fully counter-clockwise.
4. Adjust the Sub H-Hold (VR405) to obtain 14,300Hz reading.

SUB BRIGHT ADJUSTMENT

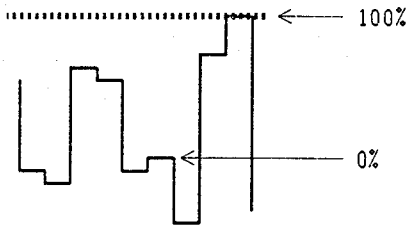
1. Connect the Monochrome Pattern to the antenna terminals.
2. Set the Auto Color (SW701) switch to OFF position.
3. Set the Contrast (VR604-2) and Brightness (VR604-1) controls to minimum position.
4. Adjust the Sub Bright (VR610) control to obtain black until 75% of the gray scale.

SUB CONTRAST ADJUSTMENT

1. Connect the Monochrome Pattern to the antenna terminals.
2. Set the Auto Color (SW701) switch to OFF position.
3. Set the Brightness (VR604-1) control to maximum position.
4. Adjust the Sub Contrast (VR404) control to obtain black until 25% of the gray scale.

COLOR LEVEL ADJUSTMENT

1. Receive the signal of color bar.
2. Set Auto Color (SW701) switch to ON position.
3. Connect oscilloscope to TP16.
4. Adjust color level to 75% with VR601.



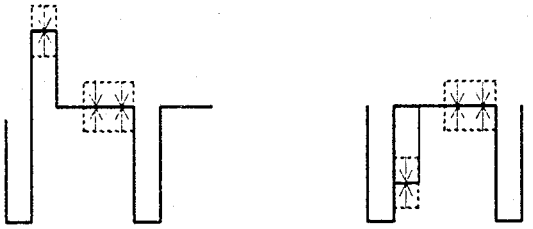
ALIGNMENT INSTRUCTIONS

APC ADJUSTMENT

1. Receive the signal of color bar.
2. Connect voltmeter between TP8 and TP9.
3. Set TC602 to center position.
4. Adjust TC601 to obtain a minimum voltage reading.

HUE DELAY ADJUSTMENT

1. Receive the signal of DEM pattern.
2. Connect dual oscilloscope to TP10 and TP11.
3. Adjust waveform to straight line with L601, VR605 and TC602.



TV COVERAGE ADJUSTMENT

Normally, this type of adjustment should not be required unless components have been replaced in the TV tuning circuitry.

VHF-L (Channel 2 through 4) Carefully tune in to the highest received channel in this band. If the channel number on the dial is not so close to the indicator marker, adjust VR104 so that the highest tuning margin point and the marker position are synchronous. Carefully tune in to the lowest received channel in this band. If this channel number on the dial is not so close to the indicator marker, adjust VR107 so that the lowest tuning margin point and the marker position are synchronous. Then, carefully tune in to all received channels in this band and check for proper dial calibration. It may be necessary to readjust VR104 and VR107 to obtain optimum results.

VHF-H (Channel 5 through 12) Proceed in the same way as discribed for VHF-L, except adjust VR102 for high end and VR103 for low end calibrations.

UHF (Channel 21 through 69) Proceed in the same way as discrebed for VHF-L, except adjust VR105 for high end and VR106 for low end calibrations.

ALIGNMENT INSTRUCTIONS

COLOR PURITY ADJUSTMENT

The receiver must have been operating 10 minutes prior to this procedure and the face plate of the CRT must be at room temperature. The following procedure is recommended while using a Dot/Bar Generator.

1. Check for correct location of all neck components. (Refer to Figure 1)
2. Rough-in the static convergence at the center of the CRT, as explained in the static convergence.
3. Rotate the contrast control to maximum CCW position and rotate brightness control as for CW as possible without causing the picture to "bloom".
4. Rotate the red bias and blue bias controls to maximum CCW position to produce a green raster.
5. Loosen the deflection yoke clamp screw and pull the deflection yoke toward the rear of the CRT.
6. Begin the following adjustment with the tabs on the round purity magnet rings set together, slowly separate the two tabs while at the same time rotating them to adjust for a uniform green stripe at the center of the CRT screen.
7. Carefully slide the deflection yoke forward to achieve green (uniform green screen).
   NOTE: Center purity was obtained by adjusting the tabs on the round purity magnet rings, outer edge purity was obtained by sliding the deflection yoke forward.
8. Check for red and blue field purity by alternately increasing output of red and blue bias controls and touch up adjustments, if required.
9. Tighten deflection yoke clamp screw.

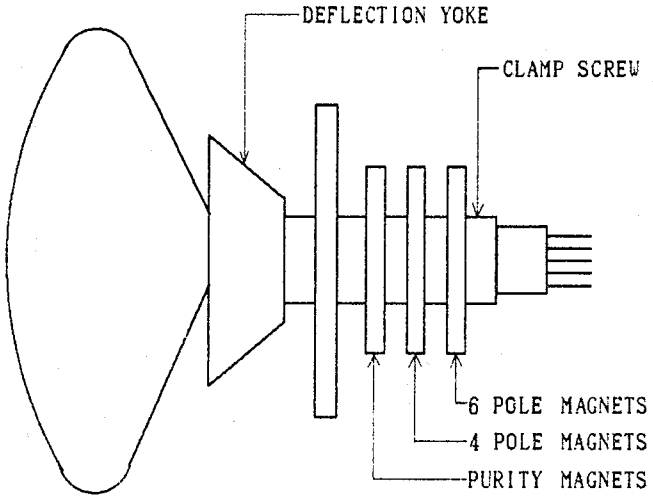


Figure 2 Picture Tube Neck Component Location

ALIGNMENT INSTRUCTIONS

BLACK AND WHITE TRACKING

The purpose of this procedure is to adjust the biases applied to the picture tube to obtain good black and white picture production at all brightness levels while, at the same time achieving maximum useable brightness. Proper RF AGC control adjustment have been verified prior to performing this procedure.

1. With antenna connected to the receiver, tune in picture on a strong received channel. Depress AFC knob to OFF position. Rotate the Color control to maximum CCW position and misadjust the tuning control so that receiver will not produce a color picture while the following adjustment are being performed.
2. Rotate the Red and Blue Drive control fulley CW and then back CCW center of their rotation ranges.
3. Rotate the Red and Blue Bias controls to the full CCW end of their rotation ranges.
4. Set normal-service switch to service position. Adjust the voltage of test point (collector of green output transistor on CRT PCB) to DC 90V with brightness control. Voltage measurement should be measured with oscilloscope.
5. Rotate the screen control to the full CCW end of its rotation range. Then, rotate it CW until a dim line of one pronounced color (green, red or blue) is obtained.
6. The other two color bias controls must be rotated CW until a dim white line is obtained.
7. Set normal-service switch to normal position.
8. If required, touch-up adjustment of the Red and Blue Drive controls to produce a uniform monochrome picture.
9. Rotate the brightness andcontrast controls fully CCW.
10. Rotate the brightness control CW until a dim raster is obtained.
11. If the screen does not display good while uniformity, step 2 through 10 this procdure must be repeated.

STATIC CONVERGENCE ADJUSTMENT

1. Switch the Receiver ON and allow it to warm up for 15 minutes.
2. Connect the output of a Crosshatch Generator to the receiver and, concentrating on the center of the CRT screen, proceed as follows:

a. Locate a pair of 4 pole magnet rings. Rotate individual rings (change spacing between tabs) to converge the vertical red and blue lines. Rotate a pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue lines.

b. After completing red and blue center convergence, locate the pair of 6 pole magnet rings. Rotate individual rings (change spacing between tabs) to converge the vertical red and blue (magenta) and green lines. Rotate a pair of rings (maintaining spacing between tabs) to converge the horizontal red and blue (magenta) and green lines.

ALIGNMENT INSTRUCTIONS

DYNAMIC CONVERGENCE ADJUSTMENT

Dynamic convergence (convergence of the three color fields at the edges of the CRT screen) is accomplished by proper insertion and positioning of three rubber wedge between the edge of the deflection yoke and the tunnel of the CRT.This is accomplished in the following manner.

1. Switch the Receiver ON and allow it to warm up for 15 minutes.
2. Apply crosshatch pattern from Dot/Bar Generator to receiver. Observe spacing between lines around edges of CRT screen.
3. Tilt the deflection yoke up or down, and insert tilt adjustment wedges (1) and (2) between the deflection yoke and the CRT until the mis-convergence illustrated in Figure 2 (A) has been corrected.
4. Tilt the deflection yoke right and left, and insert tilt adjustment wedge (3) between the deflection yoke and the CRT until the mis-convergence illustrated in Figure 2 (B) has been corrected.
5. Alternately change spacing between, and depth of insertion of the three wedges proper dynamic convergence is obtained.
6. Use a strong adhesive tape to firmly secure each of the three wedges to the funnel of the CRT.
7. Check purity and readjust, if necessary.

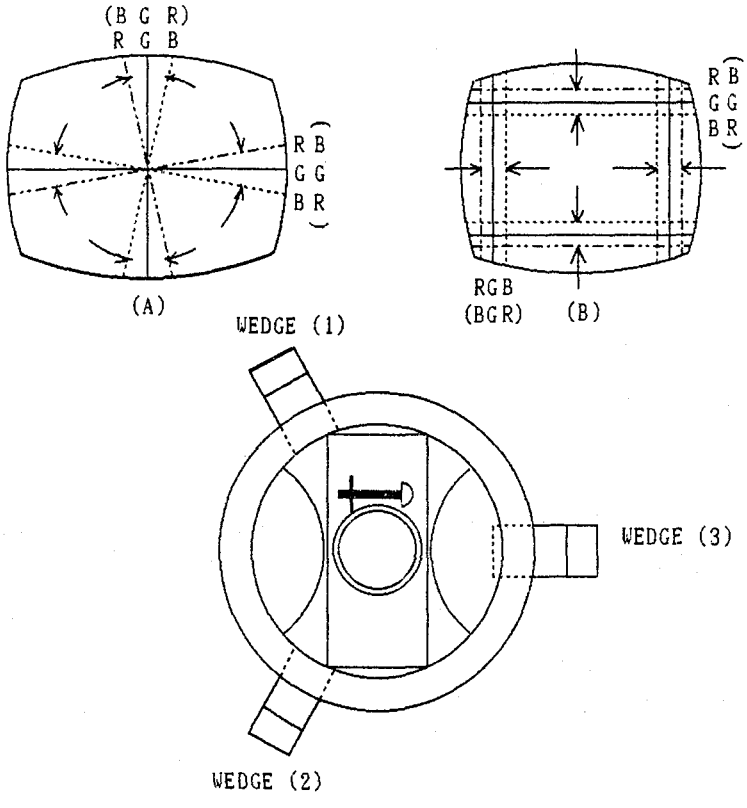


Figure 2 Dynamic Convergence Adjustment

ALIGNMENT INSTRUCTIONS

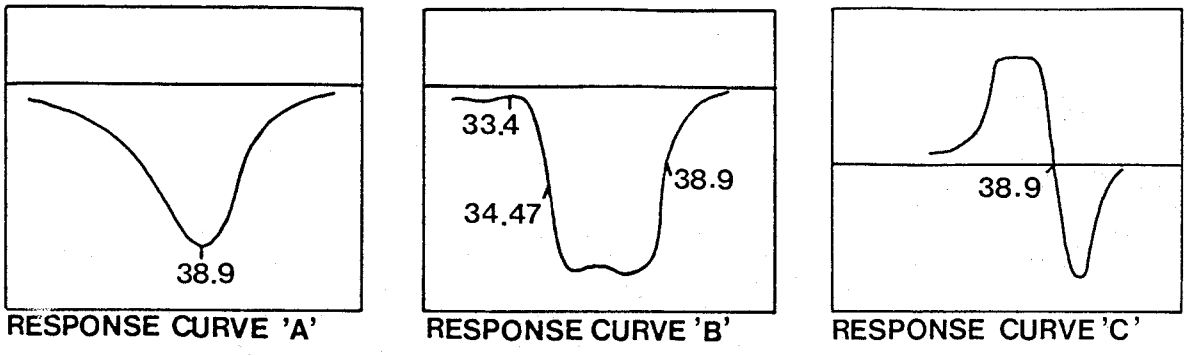
VIDEO IF ALIGNMEN

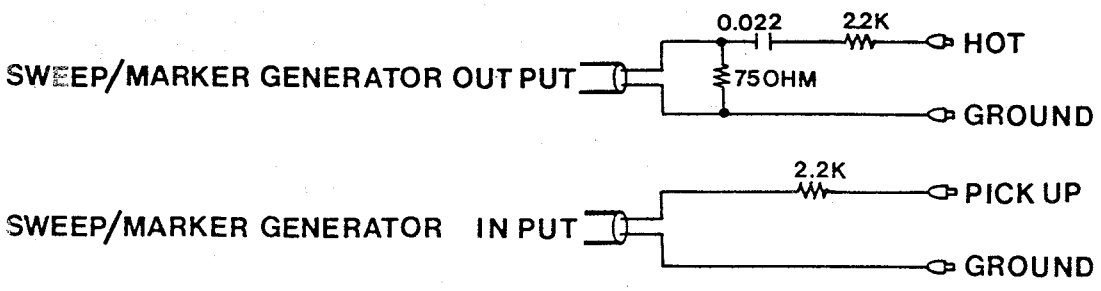
(Refer to Figure 3)
TEST EQUIPMENT CONNECTION

OSCILLOSCOPE ..... Set AC-DC switch to AC position.

SWEEP-MARKER GENERATOR .. Connect H SCOPE and V SCOPE output cable from SWEEP-MARKER GENERATOR to H and V input connectors on OSCILLOSCOPE, connect hot lead of SWEEP-MARKER OUTPUT cable to test point passed through condenser (0.0022) from the 16th on IC (LA7505); connect ground lead to a chassis ground.
Connect pick up SWEEP-MARKER INPUT cable to No.11 of 12 pin connector; ground lead to chassis ground.

STEP	ADJUSTMENT	COMPONENT	PROCEDURE
1	Connect 10K ohm variable resistor between TP(AGC), +B to ground. Adjust AGC volume not to saturate.		
2	VIF X'fmr		Adjust VIF X'fmr to obtain maximum amplitude of response curve at 38.9 MHz. (Refer to Response Curve "A")
3	Connect 100 ohm resistor both and of VIF X'fmr. Connect hot lead of SWEEP-MARKER GENERATOR OUTPUT cable to TV tuner TP.		
4	VIF X'fmr	IFT on TV tuner	Adjust IFT on TV tuner to obtain maximum amplitude of response curve. (Refer to Response Curve "B")
5	Disconnect the variable resistor and 100 ohm resistor from the circuit.		
6	Connect SWEEP-MARKER GENERATOR INPUT cable to TV tuner AFC TP on TV tuner.		
7	AFT X'fmr		Adjust for zero crossover at 38.9 MHz. (Refer to Response Curve "C")





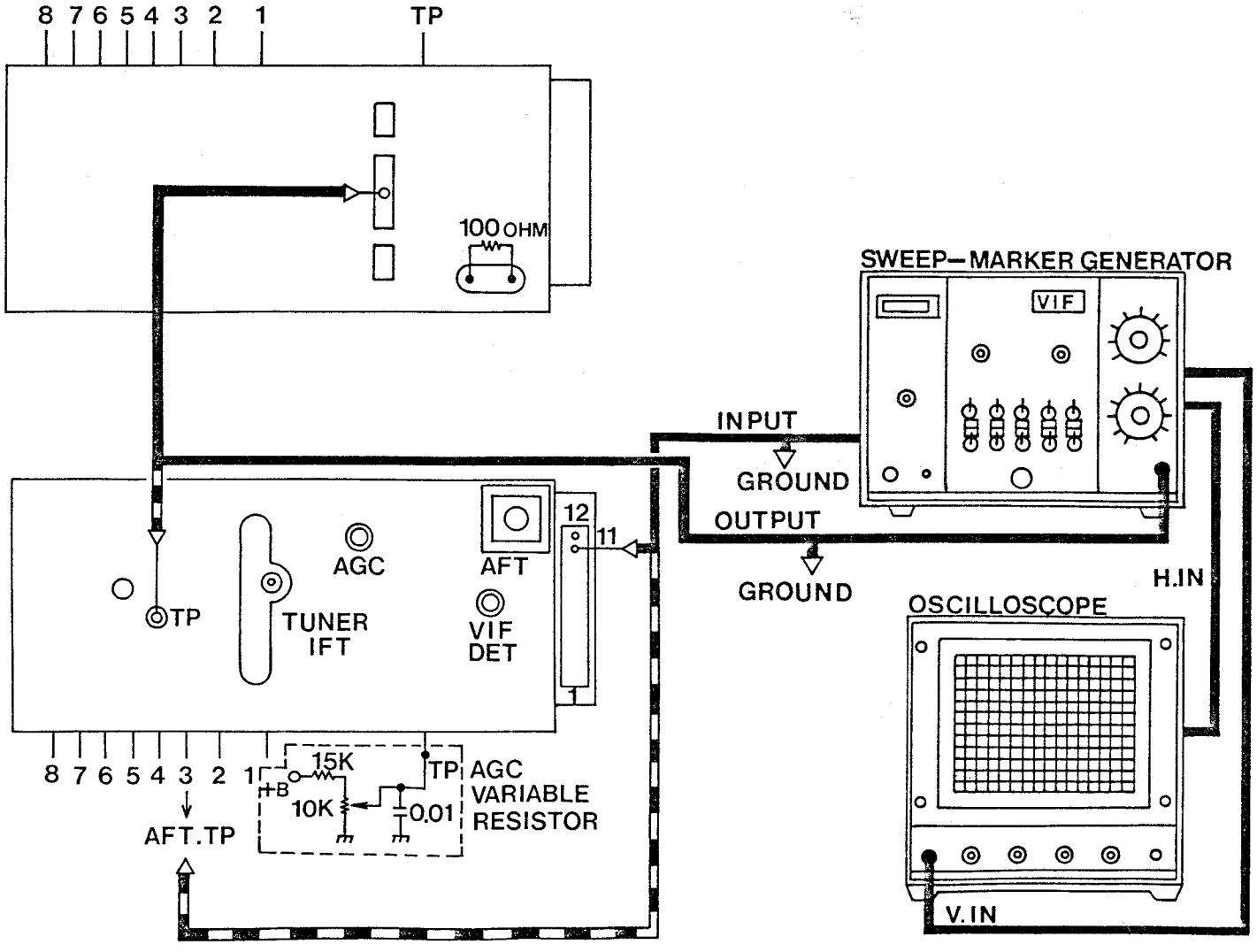


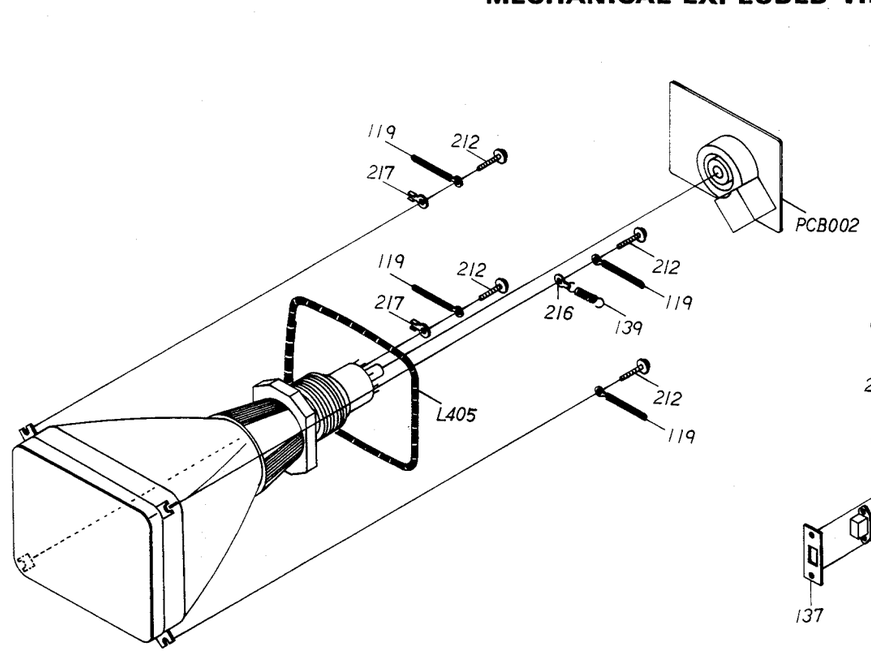
FIGURE 3 VIDEO IF AND AFC ALIGNMENT

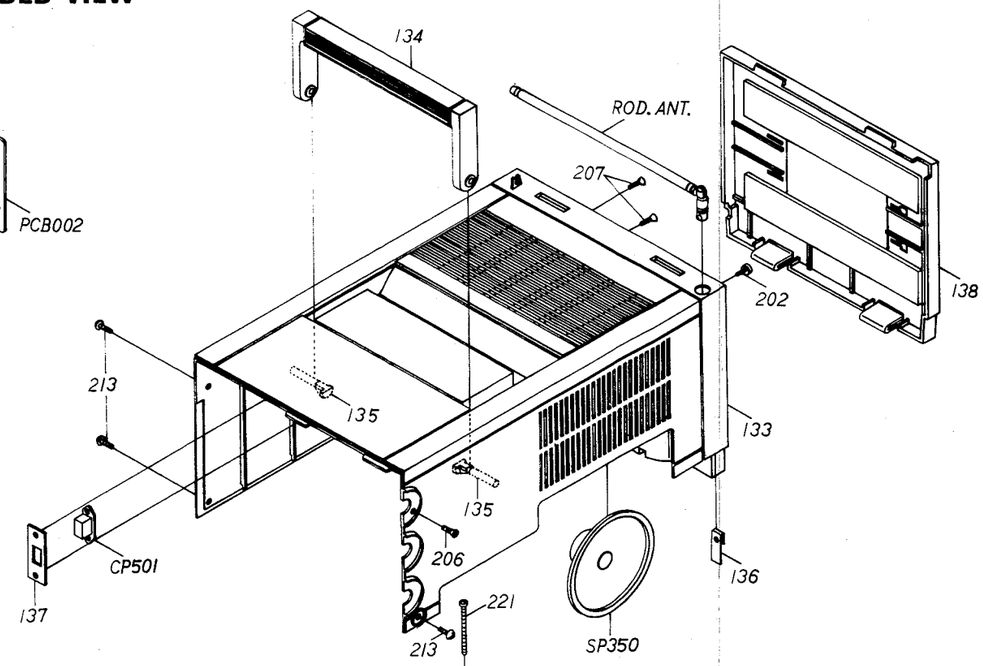
MECHANICAL REPLACEMENT PARTS LIST

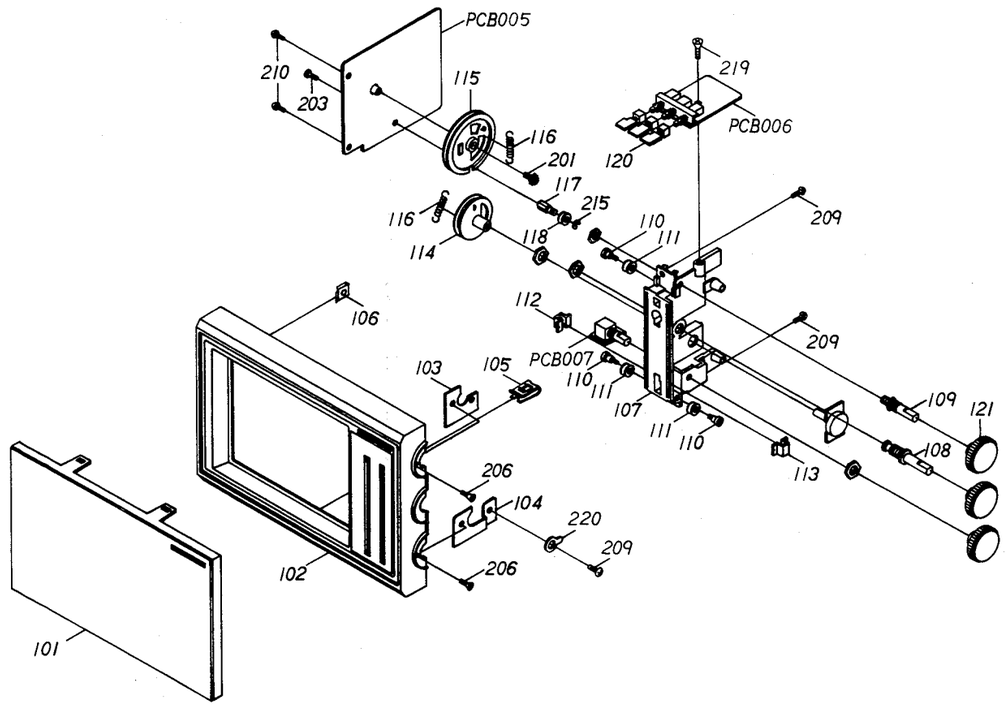
REF. NO.	PART NO.	DESCRIPTION	
101	713KPD0007	Cover, C.R.T.	
	7230000077	Plate, Color	
	800JQ00086	Sheet	50x2x0.5t
102	701KPB0019	Panel, Front	
	7210000141	Plate, Dial Scale	
103	761KSA0072	Angle, Front	
104	761KSA0086	Angle, Front (2)	
105	83USN40040	Speed Nut	
106	83USN00237	Speed Nut	
107	761KPA0008	Frame, Dial	
108	781JEA0006	Shaft, Tuning (TV)	
109	781JEA0007	Shaft, Tuning (Radio)	
110	783JSA0002	Pulley, Vis (2)	
111	8927019000	Pulley	3.9x5x6
112	873KPB0001	Pointer	
113	873KPB0002	Pointer	
114	871KPA0007	TV Dial Drum	
115	871KPA0008	Radio Dial Drum	
116	741JUA0017	Spring, Dial	
117	783KEA0008	Shaft, Pulley	
118	8927003000	Pulley	3.2x5x7.9
119	899P450000	Cord Clamp	
120	735KPE0003	Button, Push	
121	732JPA0042	Knob, Rotary	
122	A33505733	Cabinet, Bottom Assembly	
	702KPA0071	Cabinet, Bottom	
	7222020265	Plate, Rating	
	7290000006	Sheet, Serial Number	
	800JQ00087	Sheet	105x10x0.5t
	800JQ00094	Sheet	5x15
123	704JKE0001	Bottom Cabinet Leg	
	704JRA0002	Tube, Non Slip	
124	704KPA0001	Bottom Cabinet Leg Holder (R)	
125	704KPA0006	Bottom Cabinet Leg Holder (L)	
126	771KPA0018	Plate, Jack Antenna	
127	761KPA0009	Holder, P.C.B.	
128	763JAE0001	Heat Sink	
129	890PJ004V0	RCA Type 4Pin Jack	
130	771KPA0020	Plate, Jack DC	
	7240000193	Sheet, DC Jack	
131	733KPA0014	Knob, Slide	
132	736JPA0004	Button, Remote Set	
133	A33505713	Cabinet, Top Assembly	
	702KPJ0011	Cabinet, Top	
	773JEE0002	Plate, Battery	
	773JEE0005	Plate, Positive	
	773JKE0001	Spring, Negative	
	773JKE0004	Spring, Positive/Negative	
	800KF00073	Dust Cover Cushion	
	800JM00015	Cushion	160x30x5t
	800JM00019	Cushion	110x18x5t
	800JQ00088	Sheet	90x5x0.5t
	800JQ00089	Sheet	130x5x0.5t
	800JQ00111	Sheet	40x10x0.5t
134	705KPA0007	Handle	

REF. NO.	PART NO.	DESCRIPTION	
135	769JPA0004	Holder, Handle	
136	769KSA0011	Angle, Telescopic Antenna	
137	762JSA0044	Holding Metal, Connector	
138	703KPA0012	Lid, Battery	
	752KSA0051	Plate, Shield	
	800JM00015	Cushion	160x30x5t
139	741JUA0004	Spring, Earth	
140	8931364000	Cord Bush	
141	899PEC0340	Cord Clamp	
142	761KSA0078	Angle, Tuner Pack	
201	810C126601	Screw, Sems C Pan	M2.6x6
202	810A130A22	Screw, Sems A	M3x12 Black
203	8102230501	Screw, Bind	M3x5
204	8102230601	Screw, Bind	M3x6
205	8102230801	Screw, Bind	M3x8
206	8102330502	Screw, Flat	3x5 Black
207	8102330802	Screw, Flat	3x8 Black
208	8110630A02	Screw, Tap Tite (P)	3x10 Black
209	8110630A04	Screw, Tap Tite (P)	3x10
210	8110630804	Screw, Tap Tite (P)	3x8
211	8117E30A01	Screw, Tapping B (W/H 10ϕ)	3x10
212	8117E40B01	Screw, Tapping B (W/H 10ϕ)	4x20
213	8117540A02	Screw, Tapping B Truss	4x10 Black
214	8117540A22	Screw, Tapping B Truss	4x12 Black
215	83ETW20000	E-Ring	M2
216	901B060000	Earth Lug (B6)	4.2ϕ
217	901D040000	Earth Lug (D4)	4.2ϕ
218	8102230401	Screw, Bind	M3x4
219	8117330A01	Screw, Tapping B Flat	3x10
220	901B040000	Earth Lug (B4)	4.2ϕ
221	8102130E51	Screw, Pan	M3x55
222	8300230004	Nut	M3
-	791JHA0057	Sheet, Lightron	
-	792KHA0066	Package, Top	
-	792KHA0067	Package, Bottom	
-	793JCD1281	Gift Box	
-	795JCD0006	Pad, Accessories	
-	800KH00001	Pad	235x95x15t
-	800JF00076	Cushion	20x20x21t
-	800JQ00113	Sheet	10x6x0.5t
-	8995167000	Band, Cord Clamp	

MECHANICAL EXPLODED VIEW







MECHANICAL EXPLODED VIEW

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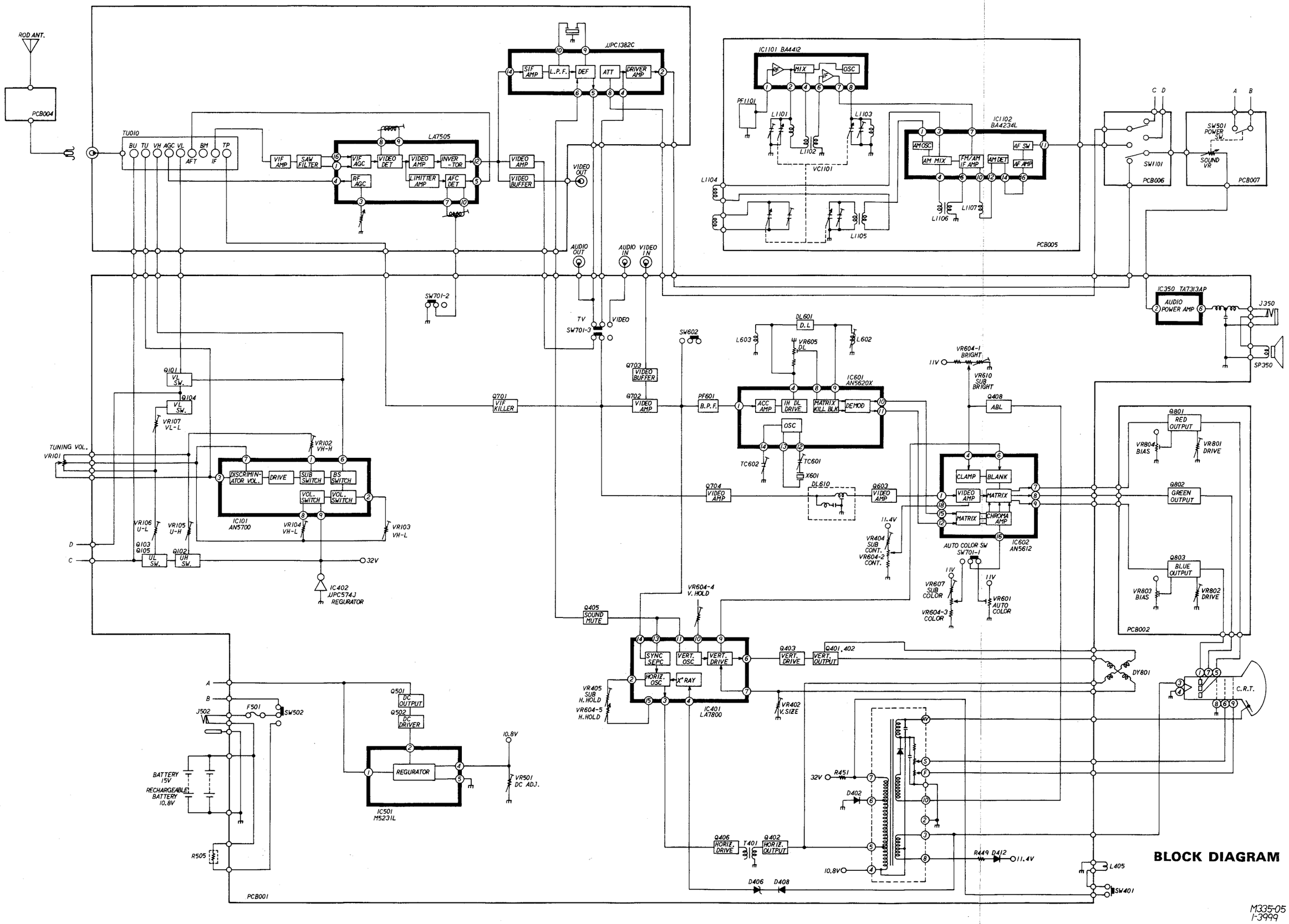
BLOCK DIAGRAM



BLOCK DIAGRAM

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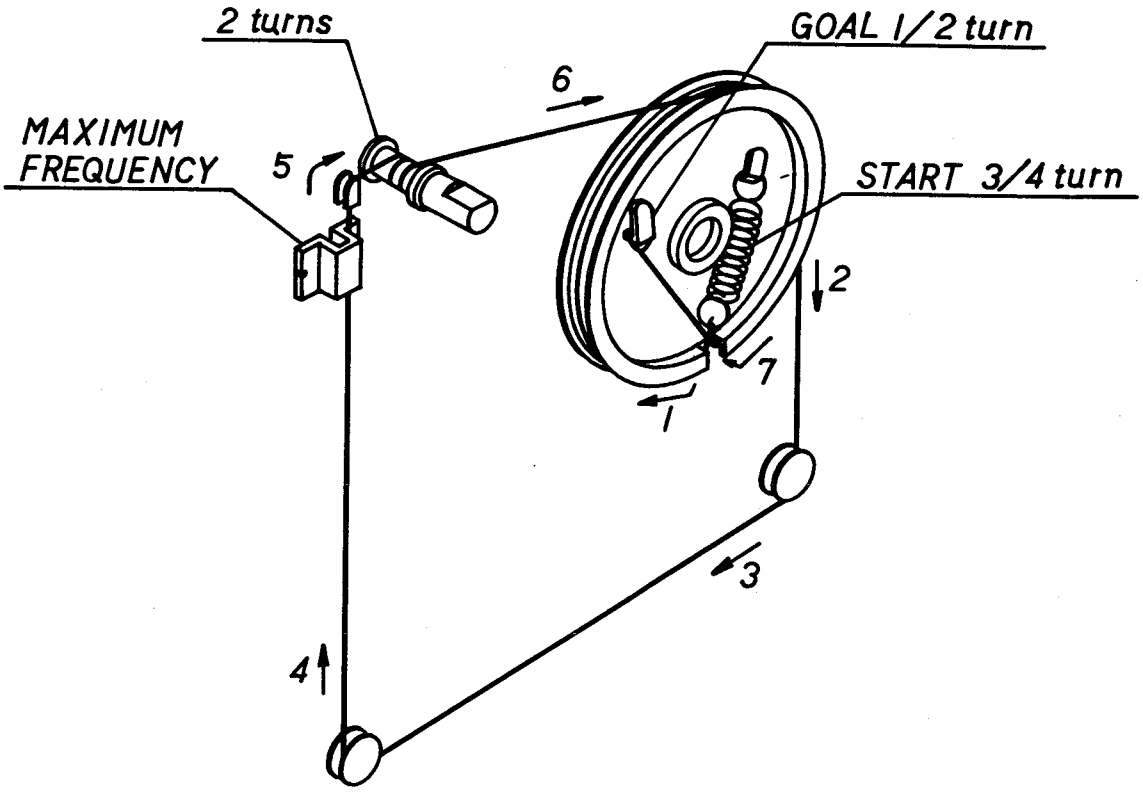
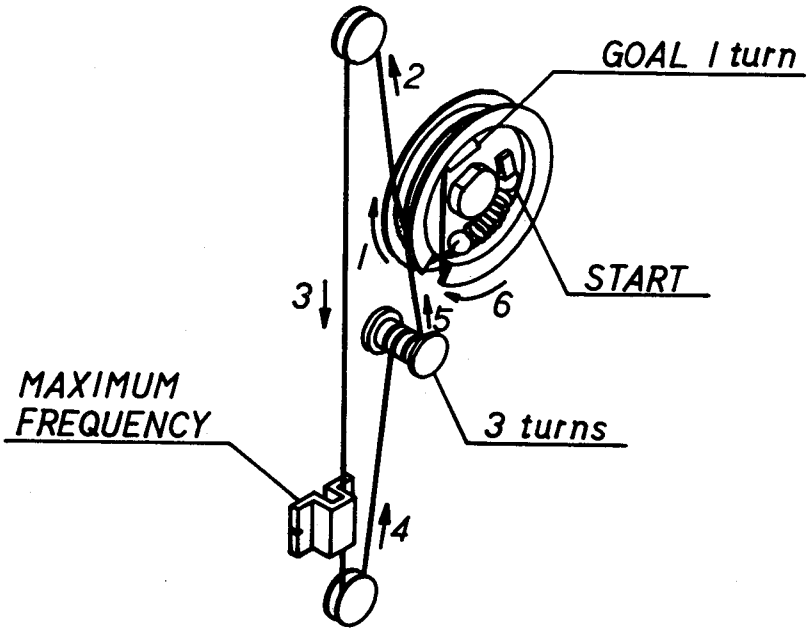
TV / RADIO DIAL STRINGING DIAGRAM

RADIO SECTION



TV SECTION



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ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION	
		-SWITCHES-	
SW401	0500101001	SWITCH,PUSH	SW-9B
SW501	V02A024A02	VOLUME,ROTARY 2A024A02	
SW502	0510122007	SWITCH,SLIDE	ESD-2764
SW602	0510422001	SWITCH,SLIDE	SS-009-7H
SW701	0500103004	SWITCH,PUSH	ESB-621518
SW1101	0500203005	SWITCH,PUSH	SPUJ30044A
		-VARIABLE RESISTORS-	
VR101	V011015B03	VOLUME,ROTALY	EWH-BMA091B15
VR102	V1263Q4B01	VOLUME SEMI FIXED	RHEOAS40CA (H0615C117)
VR103	V1263Q4B01	VOLUME SEMI FIXED	RHEOAS40CA (H0615C117)
VR104	V126315B01	VOLUME SEMI FIXED	RHEOA150KB (H0615C119)
VR105	V1163Q4B03	VOLUME SEMI FIXED	EVM4LGA00BQ4
VR106	V1263Q3B01	VOLUME SEMI FIXED	RHEOAS30EB (H0615C111)
VR107	V1263Q3B01	VOLUME SEMI FIXED	RHEOAS30EB (H0615C111)
VR402	V115232B01	VOLUME SEMI FIXED	EVN-K0AA00B32
VR404	V115354B02	VOLUME,SEMI FIXED	EVN-52JA00B54
VR405	V115333B02	VOLUME,SEMI FIZED	EVN-52JA00B33
VR501	V115313B02	VOLUME,SEMI FIXED	EVN-52JA00B13
VR601	V115354B02	VOLUME,SEMI FIXED	EVN-52JA00B54
VR604	V019500003	VOLUME,ROTALY	EVUG5ABA0010
VR605	V1263H3B01	VOLUME SEMI FIXED	RHEOAJ309B (H0615C109)
VR607	V1263Q3B01	VOLUME SEMI FIXED	RHEOAS30EB (H0615C111)
VR610	V1263H4B01	VOLUME SEMI FIXED	RHEOAJ40DB (H0615C115)
VR801	V175C52B01	VOLUME,SEMI FIXED	RVA0911H304-1-501M
VR802	V175C53B01	VOLUME,SEMI FIXED	RVA0911H304-1-502M
VR803	V175C53B03	VOLUME,SEMI FIXED	RVA0911H304-3-502M
VR804	V175C52B03	VOLUME,SEMI FIXED	RVA0911H304-3-501M
		-P.C. BOARDS-	
PCB001	13TM0050C3	PCB	TM0050C
PCB002	13TC0046C3	PCB	TC0046C
PCB004	13TE0266A3	PCB	TE0266A
PCB005	13PR0026C2	PCB	PR0026C
PCB006	13TE0242C2	PCB	TE0242C
PCB007	13TE0243C2	PCB	TE0243C
		-MISCELLANEOUS-	
⚠ AD501	0415420011	AC ADAPTER	AD-8067
ANT001	1255110005	ANTENNA ROD	T-2288
CD001	068M1C040A	CORD EIS CONNECTOR	8M1C040A
CD002	0683H15002	CORD UX CONNECTOR	83H15002
CD003	0682H11003	CORD,COAXITAL	HXC0492-01-010
CD004	068301040B	CORD EIS CONNECTOR	8301040B
CD006	068314091A	CORD EIS CONNECTOR	8314091A
CD007	068319025A	CORD EIS CONNECTOR	8319025A
CD008	068M15045B	CORD EIS CONNECTOR	8M15045B
CD009	068312137A	CORD,EIS CONNECTOR	8312137A
CD010	068312138A	CORD,EIS CONNECTOR	8312138A
CD011	068312146A	CORD EIS CONNECTOR	8312146A
CD101	068M14071B	CORD EIS CONNECTOR	8M14071B
CD501	068332024A	CORD EIS CONNECTOR	8332024A
CD502	068313076B	CORD EIS CONNECTOR	8313076B
CD604	122N041401	CORD,JUNPER	2N041401
CD801	068301036A	CORD EIS CONNECTOR	8301036A
CD802	122N032002	CORD,JUNPER	2N032002
CD803	122N052201	CORD,JUNPER	2N052201
CP004	1261000001	TERMINAL PIN	171255-1
CP007	0694190059	CONNECTOR PCB SIDE	171826-9
CP008	0694150059	CONNECTOR PCB SIDE	171826-5
CP011	0694120056	CONNECTOR PCB SIDE	4-171826-2
CP101	0694140010	CONNECTOR PCB SIDE	2-171825-4
CP401	0693320029	CONNECTOR PCB SIDE	TV-50P-02-V1
CP403	0694140019	CONNECTOR PCB SIDE	171825-4
CP501	0693320018	CONNECTOR PCB SIDE	RTB-2.36-2TV
CP502	0694130019	CONNECTOR PCB SIDE	171825-3
CP801	0693010010	CONNECTOR,PIN CENTER	RT-01N-2.3A
CF1101	1012510R74	FILTER,CERAMIC	SFE10.7MS2-Z
CF1102	1012510R74	FILTER,CERAMIC	SFE10.7MS2-Z
CF1103	10127R4551	FILTER,CERAMIC	SFU 455B
DL601	104114R431	DELAY LINE GLASS	EFD-EN645A01A
DL610	10312R5001	DELAY	ELT-10Z456
DY801	0274044F02	DEFRECTION YOKE	74044F02
EAR001	074F130002	EARPHONE	4F130002
F501	0802T1R601	FUSE	FST 1.6 A (T) 250V
⚠ FB401	0437050021	TRANSFOMER,FLYBACK	3705002
FH501	067H000001	HOLDER,FUSE	7800-6268
FH502	067H000001	HOLDER,FUSE	7800-6268
JC801	0662310001	SOCKET,COVER CRT	HPS0110-05-010
K801	129T000004	WEDGE	TRI-26
K802	129T000004	WEDGE	TRI-26
K803	129T000004	WEDGE	TRI-26
MS002	128F000001	MICA SHEET	1S313B
PF350	11624223S2	FILTER EMI	DSS310-55D223S

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION	
		-MISCELLANEOUS (CONT)-	
PF601	1144144601	FILTER,BAND PASS	LC-973A2
PF1101	1145398701	FILTER,FM ANT BAND PASS	PFWE4
S001	128F100003	SPACER	BUSH-M
SP350	0701031004	SPEAKER	EAS-8P01AC
TC601	0100514001	C,CERAMIC TRIMMER	TZ03R300E
TC602	0100514001	C,CERAMIC TRIMMER	TZ03R300E
TP001	126V000003	TERMINAL PIN	IPS-2035
TP002	126V000003	TERMINAL PIN	IPS-2035
TP004	126V000003	TERMINAL PIN	IPS-2035
TP006	126V000003	TERMINAL PIN	IPS-2035
TP007	126V000003	TERMINAL PIN	IPS-2035
TP008	126V000003	TERMINAL PIN	IPS-2035
TP009	126V000003	TERMINAL PIN	IPS-2035
TP010	126V000003	TERMINAL PIN	IPS-2035
TP011	126V000003	TERMINAL PIN	IPS-2035
TP012	126V000003	TERMINAL PIN	IPS-2035
TP013	126V000003	TERMINAL PIN	IPS-2035
TP014	126V000003	TERMINAL PIN	IPS-2035
TP015	126V000003	TERMINAL PIN	IPS-2035
TP016	126V000003	TERMINAL PIN	IPS-2035
TP017	126V000003	TERMINAL PIN	IPS-2035
TP028	126V000003	TERMINAL PIN	IPS-2035
⚠ TU101	0145201002	TUNER,UHF-VHF	EC-1E-0104
TP1101	126V000003	TERMINAL PIN	IPS-2035
TP1102	126V000003	TERMINAL PIN	IPS-2035
TP1103	126V000003	TERMINAL PIN	IPS-2035
TP1104	126V000003	TERMINAL PIN	IPS-2035
TP1105	126V000003	TERMINAL PIN	IPS-2035
TP1106	126V000003	TERMINAL PIN	IPS-2035
TP1107	126V000003	TERMINAL PIN	IPS-2035
⚠ V801	09245R5401	TUBE,CATHODE RAY	150CAB22
VC1101	0111813601	PVC	CJ-504-1184
X601	10054R4301	CRYSTAL	NR-18 NDK4.433619MHZ

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION
		-CAPACITORS (CONT)-
C509	E011F2101M	CE ECEA1CU101E 100 UF 16 V
C601	CF4TSL4B2J	CC UP125SL121JA 120 PF 50V
C602	E027F2102M	CE 16TWSS102MKC 1000 UF 16V
C603	C02TF0414Z	CC RTHE70SJYF103Z 0.01 UF F
C604	C020RH431J	CC HE50SJRH300J 30 PF N220
C605	C020RH411F	CC HE40SJRH100F 10 PF N220
C606	C020RH411F	CC HE40SJRH100F 10 PF N220
C607	C02TF0414Z	CC RTHE70SJYF103Z 0.01 UF F
C608	C02TF0414Z	CC RTHE70SJYF103Z 0.01 UF F
C609	E021T53R3M	CE 50TWMS3R3MTA 3.3 UF 50V
C610	C02TF0414Z	CC RTHE70SJYF103Z 0.01 UF F
C611	E02ET5010M	CE 50NW010M 1 UF 50V
C612	C02TF0414Z	CC RTHE70SJYF103Z 0.01 UF F
C614	E021T5100M	CE 50TWMS100MTA 10 UF 50V
C615	E021T5100M	CE 50TWMS100MTA 10 UF 50V
C616	E021T5100M	CE 50TWMS100MTA 10 UF 50V
C617	C02TSL4U2J	CC RTHE11SJSL681J 680 PF SL
C618	C02FSL4Q1J	CC HE40SJSL470J 47 PF SL
C621	E027F2102M	CE 16TWSS102MKC 1000 UF 16V
C622	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C623	C02TF0414Z	CC RTHE70SJYF103Z 0.01 UF F
C625	C02TF0414Z	CC RTHE70SJYF103Z 0.01 UF F
C626	E02ET34R7M	CE 25NW4R7M 4.7 UF 25V
C627	E021F50R1M	CE 50TWMS0R1MCK 0.1 UF 50V
C628	E021F50R1M	CE 50TWMS0R1MCK 0.1 UF 50V
C629	E02ET34R7M	CE 25NW4R7M 4.7 UF 25V
C630	C02TSL4W1J	CC RTHE50SJSL820J 82 PF SL
C631	E021F50R1M	CE 50TWMS0R1MCK 0.1 UF 50V
C632	C02TSL4W1J	CC RTHE50SJSL820J 82 PF SL
C634	C02TSL4B2K	CC RTHE50SJSL121K 120 PF SL
C635	E021T5010M	CE 50TWMS010MTA 1 UF 50V
C636	E021T5010M	CE 50TWMS010MTA 1 UF 50V
C637	E021T53R3M	CE 50TWMS3R3MTA 3.3 UF 50V
C638	P121T0153K	CP 50F2S153KTV 0.015 UF 50V
C639	P121T0153K	CP 50F2S153KTV 0.015 UF 50V
C640	P13300472J	CPP AMZ 50V472J 0.0047 UF 50V
C701	E021T5010M	CE 50TWMS010MTA 1 UF 50V
C702	E031T2101M	CE 100UF 16V ULB1C101MAA1TA
C703	C020SL4R1K	CC HE40SJSL510K 51 PF SL
C704	C02TF0414Z	CC RTHE70SJYF103Z 0.01 UF F
C705	E021F2471M	CE 16TWMS471MCK 470 UF 16V
C706	E021T5100M	CE 50TWMS100MTA 10 UF 50V
C707	E021T5100M	CE 50TWMS100MTA 10 UF 50V
C708	E027T2221M	CE 16TWSS221MTA 220 UF 16V
C709	E031T2330M	CE 33 UF 16V ULB1C330MAA1TA
C710	E02ET3100M	CE 25NW100M 10 UF 25V
C711	E027T1471M	CE 10TWSS471MTA 470 UF 10V
C801	C02TSL4H2K	CC RTHE70SJSL221K 220 PF SL
C802	C02FSL4N2K	CC RTHE80SJSL391J 390 PF
C803	C02TSL4H2K	CC RTHE70SJSL221K 220 PF SL
C804	C03FB0713K	CC DD3120-362B102K2KV02 1000PF 2KV B
C805	C03FB0713K	CC DD3120-362B102K2KV02 1000PF 2KV B
C806	C020SL512K	CC HM60SJSL101K 100 PF 500V SL
C1101	C02TSL4N1J	CC RTHE40SJSL390J 39 PF SL
C1102	C02FSL4H1J	CC HE40SJSL220J 22 PF SL
C1103	C02FSL411F	CC HE40VJSL100F 10 PF SL
C1104	C02FSL440D	CC HE40SJSL040D 4 PF SL
C1105	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1107	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1109	C020RH4H1J	CC HE40SJRH220J 22 PF N220
C1110	E021T50R1M	CE 50TWMS0R1MTA 0.1 UF 50V
C1111	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1116	C020UJ420D	CC 2 PF N750 HE40TJUJ420D
C1117	P02100141J	CST 50SU141J 140 PF 50V
C1118	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1120	E021T1101M	CE 10TWMS101MTA 100 UF 10V
C1121	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1122	P133T0123J	CPP AMZV50V123J 0.012 UF 50V
C1124	E021T3220M	CE 25TWMS220MTA 22 UF 25V
C1125	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1126	E021T1221M	CE 10TWMS221MTA 220 UF 10V
C1127	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1128	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1130	P133T0103J	CPP AMZV50V103J 0.01 UF 50V
C1131	P133T0683J	CPP AMZV50V683J 0.068 UF 50V
C1132	P133F0562J	CPP AMZD50V562J 0.0056 UF 50V
C1133	E021F1101M	CE 10TWMS101MKC 100 UF 10V
C1135	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1136	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1137	E021F5010M	CE 50TWMS010MCK 1 UF 50V
C1138	C02TF04H4Z	CC RTHE90SJYF223Z 0.022 UF ZF
C1140	C020F0413Z	CC HE40SJYF102Z 0.001 UF F
C1142	P121T0103K	CP 50F2S103KTV 0.01 UF 50V

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION		
		-SEMICONDUCTORS-		
D101	D110BA243S	DIODE,SILICON	BA243S	
D102	D110BA243S	DIODE,SILICON	BA243S	
D401	D28F00BB40	DIODE,RECTIFIER	BB4-FC	
D402	D28T010D20	DIODE RECTIFIER	10D-2 T	
D403	D6400023GB	DIODE VARISTA	HV23GBL	
D404	D6400023GB	DIODE VARISTA	HV23GBL	
D405	D13TGMA010	DIODE,SILICON	GMA-01-BT	
D406	D9200110B2	DIODE ZENER	RD11EB 2	
D407	D13TGMA010	DIODE,SILICON	GMA-01-BT	
D408	D23TDFD05G	DIODE,RECTIFIER	DFD05G	
D409	D13TGMA010	DIODE,SILICON	GMA-01-BT	
D410	D13TGMA010	DIODE,SILICON	GMA-01-BT	
D411	D28F00BB80	DIODE,RECTIFIER	BB8-F	
D412	D28F00BB40	DIODE,RECTIFIER	BB4-FC	
D501	D28T010D10	DIODE RECTIFIER	10D-1 T	
D502	D28T010D10	DIODE RECTIFIER	10D-1 T	
D701	D13TGMA010	DIODE,SILICON	GMA-01-BT	
D1101	D13TGMA010	DIODE,SILICON	GMA-01-BT	
D1103	D13TGMA010	DIODE,SILICON	GMA-01-BT	
D1104	D93005R60Y	DIODE ZENER	GZA5.6 Y	
IC101	I01S057000	INTEGRATED CIRCUIT	AN5700	
IC350	I05SP73130	INTEGRATED CIRCUIT	TA7313AP	
IC401	I03DD78000	INTEGRATED,CIRCUIT	LA7800	
IC402	I02990574J	INTEGRATED CIRCUIT	UPC574J	
IC501	I06T95231L	INTEGRATED,CIRCUIT	M5231L	
IC601	I01D5620X0	INTEGRATED,CIRCUIT	AN5620X	
IC602	I01DE56120	INTEGRATED CIRCUIT	AN5612	
IC1101	I07SJ44120	INTEGRATED CIRUCIT	BA4412	
IC1102	I07TN42340	INTEGRATED CIRCUIT	BA4234L	
Q101	TA2T007330	TRANSISTOR SILICON	2SA733-T	
Q102	TA2T007330	TRANSISTOR SILICON	2SA733-T	
Q103	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q104	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q105	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q401	TD300612KE	TRANSISTOR SILICON	2SD612KE	
Q402	TB300632KE	TRANSISTOR SILICON	2SB632KE	
Q403	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q404	TD10007720	TRANSISTOR,SILICON	2SD772	
Q405	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q406	TC2T020010	TRANSISTOR SILICON	2SC2001-T	
Q407	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q408	TA2T007330	TRANSISTOR SILICON	2SA733-T	
Q501	TB10008700	TRANSISTOR,SILICON	2SB870	
Q502	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q603	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q701	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q702	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q703	TC3T022740	TRANSISTOR,SILICON	2SC2274	
Q704	TC2T009450	TRANSISTOR SILICON	2SC945-T	
Q801	TC3002271E	TRANSISTOR,SILICON	2SC2271E	
Q802	TC3002271E	TRANSISTOR,SILICON	2SC2271E	
Q803	TC3002271E	TRANSISTOR,SILICON	2SC2271E	
		- COILS & TRANSFORMERS-		
L401	0221000005	COIL,LINEARITY	21000005	ELH5L90
L402	021669472K	COIL EL0909SKI-472K	4.7 MH	
L403	021706301J	COIL 6C12-A-301J	300 UH	
L404	021767101K	COIL,INDUCTOR	100 UH	
L405	028D5R5002	COIL,DEGAUS	8D5R5002	
L601	0216834R7K	COIL EL0606SKI-4R7K	4.7 UH	
L602	03353A0018	COIL,MATCHING	353A001	16034SU
L603	0216636R8K	COIL EL0606SKI-6R8K	6.8 UH	
L606	021663470K	COIL EL0606SKI-470K	47 UH	
L607	021683390K	COIL EL0606-390K	39 UH	
L608	021663680K	COIL EL0606SKI-680K	68 UH	
L701	021663150K	COIL EL0606SKI-150K	15 UH	
L801	021663101K	COIL EL0606SKI-101K	100 UH	
L1101	0209804540	COIL,FM RF	09804540	0031KM
L1102	0306050088	COIL,FM IFT	0605008	
L1103	0301020099	COIL FM OSC	0102009	
L1104	0341210019	COIL,BAR ANT 121001		
L1105	0306220019	COIL,MW OSC	06220019	02106KM
L1106	0306400078	COIL,AM IFT	0640007	
L1107	0306050098	COIL,FM IFT	0605009	
T401	0450190041	TRANS,HORIZONTAL DRIVE	1418MS	
		-JACK & CONNECTORS-		
J350	0602101007	JACK,RCA 35	HSJ0800-01-020	
J501	063T100001	SOCKET,CHARGE	3T100001	
J502	0602601002	JACK,DC	HEC0470-01-620	
⚠ J801	0662110003	SOCKET,CAHODE,RAY TUBE	HPS0110-01-210	

ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION	
		-RESISTORS (CONT)-	
R609	R031T4224J	RC RD25ST26-224J	220K OHM 1/4W
R610	R031T6681J	RC RD16ST26-681J	680 OHM 1/6W
R611	R031T6472J	RC RD16ST26-472J	4.7K OHM 1/6W
R612	R031T6472J	RC RD16ST26-472J	4.7K OHM 1/6W
R613	R03106224J	RC RD16S-224J	220K OHM 1/6W
R614	R03106152J	RC RD16S-152J	1.5K OHM 1/6W
R615	R031T6331J	RC RD16ST26-331J	330 OHM 1/6W
R624	R03106821J	RC RD16S-821J	820 OHM 1/6W
R625	R031T6182J	RC RD16ST26-182J	1.8K OHM 1/6W
R626	R031T6393J	RC RD16ST26-393J	39K OHM 1/6W
R627	R031T6471J	RC RD16ST26-471J	470 OHM 1/6W
R628	R031T6471J	RC RD16ST26-471J	470 OHM 1/6W
R630	R031T4272J	RC RD25ST26-272J	2.7K OHM 1/4W
R631	R031T6471J	RC RD16ST26-471J	470 OHM 1/6W
R632	R031T6391J	RC RD16ST26-391J	390 OHM 1/6W
R633	R031T6152J	RC RD16ST26-152J	1.5K OHM 1/6W
R634	R031T4103J	RC RD25ST26-103J	10K OHM 1/4W
R635	R031T4683J	RC RD25ST26-683J	68K OHM 1/4W
R637	R031T4102J	RC RD25ST26-102J	1K OHM 1/4W
R638	R031T4271J	RC RD25ST26-271J	270 OHM 1/4W
R639	R031T4271J	RC RD25ST26-271J	270 OHM 1/4W
R640	R031T4271J	RC RD25ST26-271J	270 OHM 1/4W
R641	R031T6472J	RC RD16ST26-472J	4.7K OHM 1/6W
R642	R031T6223J	RC RD16ST26-223J	22K OHM 1/6W
R643	R031T6471J	RC RD16ST26-471J	470 OHM 1/6W
R644	R031T6331J	RC RD16ST26-331J	330 OHM 1/6W
R645	R031T4681J	RC RD25ST26-681J	680 OHM 1/4W
R650	R031T6153J	RC RD16ST26-153J	15K OHM 1/6W
R651	R031T6102J	RC RD16ST26-102J	1K OHM 1/6W
R653	R61504100J	R,FUSE ERQ-14AJ100	10 OHM 1/4W
R656	R61504100J	R,FUSE ERQ-14AJ100	10 OHM 1/4W
R658	R031T6682J	RC RD16ST26-682J	6.8K OHM 1/6W
R659	R031T6682J	RC RD16ST26-682J	6.8K OHM 1/6W
R701	R031T6100J	RC RD16ST26-100J	10 OHM 1/6W
R702	R031T6152J	RC RD16ST26-152J	1.5K OHM 1/6W
R703	R031T6153J	RC RD16ST26-153J	15K OHM 1/6W
R704	R031T6273J	RC RD16ST26-273J	27K OHM 1/6W
R705	R031T6223J	RC RD16ST26-223J	22K OHM 1/6W
R706	R031T6391J	RC RD16ST26-391J	390 OHM 1/6W
R707	R031T6222J	RC RD16ST26-222J	2.2K OHM 1/6W
R708	R031T6822J	RC RD16ST26-822J	8.2K OHM 1/6W
R709	R031T6331J	RC RD16ST26-331J	330 OHM 1/6W
R710	R031T6681J	RC RD16ST26-681J	680 OHM 1/6W
R711	R03106820J	RC RD16S-820J	82 OHM 1/6W
R712	R031T6221J	RC RD16ST26-221J	220 OHM 1/6W
R713	R031T6472J	RC RD16ST26-472J	4.7K OHM 1/6W
R715	R031T6822J	RC RD16ST26-822J	8.2K OHM 1/6W
R716	R031T6153J	RC RD16ST26-153J	15K OHM 1/6W
R717	R031T6470J	RC RD16ST26-470J	47 OHM 1/6W
R718	R03106123J	RC RD16S-123J	12K OHM 1/6W
R719	R031T6122J	RC RD16ST26-122J	1.2K OHM 1/6W
R720	R031T6122J	RC RD16ST26-122J	1.2K OHM 1/6W
R721	R031T6104J	RC RD16ST26-104J	100K OHM 1/6W
R722	R031T6680J	RC RD16ST26-680J	68 OHM 1/6W
R723	R031T6122J	RC RD16ST26-122J	1.2K OHM 1/6W
R801	R031T6181J	RC RD16ST26-181J	180 OHM 1/6W
R802	R031T6272J	RC RD16ST26-272J	2.7K OHM 1/6W
R803	R031T6101J	RC RD16ST26-101J	100 OHM 1/6W
R804	R031T6272J	RC RD16ST26-272J	2.7K OHM 1/6W
R805	R031T6271J	RC RD16ST26-271J	270 OHM 1/6W
R806	R031T6392J	RC RD16ST26-392J	3.9K OHM 1/6W
R807	R031T6122J	RC RD16ST26-122J	1.2K OHM 1/6W
R808	R031T6272J	RC RD16ST26-272J	2.7K OHM 1/6W
R809	R031T6181J	RC RD16ST26-181J	180 OHM 1/6W
R810	R012T2272J	RC ERD-S1TJ272T	2.7K OHM 1/2W
R811	R012T2272J	RC ERD-S1TJ272T	2.7K OHM 1/2W
R812	R012T2272J	RC ERD-S1TJ272T	2.7K OHM 1/2W
R813	R012T2153J	RC ERD-S1TJ153T	15K OHM 1/2W
R814	R012T2153J	RC ERD-S1TJ153T	15K OHM 1/2W
R815	R012T2153J	RC ERD-S1TJ153T	15K OHM 1/2W
R816	R012T2474J	RC ERD-S1TJ474T	470K OHM 1/2W
R1102	R031T4330J	RC RD25ST26-330J	33 OHM 1/4W
R1103	R031T6101J	RC RD16ST26-101J	100 OHM 1/6W
R1104	R031T6331J	RC RD16ST26-331J	330 OHM 1/6W
R1105	R031T4470J	RC RD25ST26-470J	47 OHM 1/4W
R1107	R031T6224J	RC RD16ST26-224J	220K OHM 1/6W
R1108	R031T4104J	RC RD25ST26-104J	100K OHM 1/4W
R1112	R031T6100J	RC RD16ST26-100J	10 OHM 1/6W
R1115	R031T6224J	RC RD16ST26-224J	220K OHM 1/6W
R1116	R031T6104J	RC RD16ST26-104J	100K OHM 1/6W
R1117	R031T6561J	RC RD16ST26-561J	560 OHM 1/6W
R1118	R031T6471J	RC RD16ST26-471J	470 OHM 1/6W
R1120	R012T2271J	RC ERD-S1TJ271T	270 OHM 1/2W
R1128	R031T6562J	RC RD16ST26-562J	5.6K OHM 1/6W

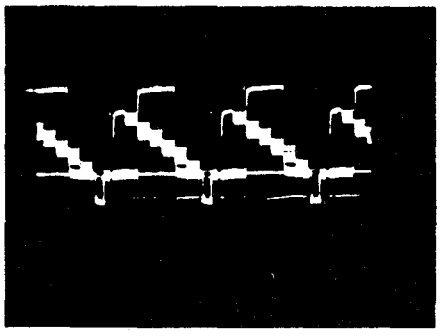
ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION		
		-RESISTORS (CONT)-		
R1133	R031T4102J	RC RD25ST26-102J	1K OHM 1/4W	
R1134	R031T6682J	RC RD16ST26-682J	6.8K OHM 1/6W	
R1135	R031T4100J	RC RD25ST26-100J	10 OHM 1/4W	
R1136	R03106334J	RC RD16S-334J	330K OHM 1/6W	
R1138	R03106102J	RC RD16S-102J	1K OHM 1/6W	
		-CAPACITORS-		
C001	E027T2221M	CE 16TWSS221MTA	220 UF 16V	
C002	E021T52R2M	CE 50TWMS2R2MTA	2.2 UF 50V	
C003	E021T52R2M	CE 50TWMS2R2MTA	2.2 UF 50V	
C004	E021T5100M	CE 50TWMS100MTA	10 UF 50V	
C005	E021T5R47M	CE 50TWMSR47MTA	0.47 UF 50V	
C006	E027F2331M	CE 16TWSS331MKC	330 UF 16V	
C007	E021T5100M	CE 50TWMS100MTA	10 UF 50V	
C101	C02FB0413K	CC HE50TJYB102K	1000 PF	B
C102	C02FB0413K	CC HE50TJYB102K	1000 PF	B
C103	C02FB0413K	CC HE50TJYB102K	1000 PF	B
C104	C02FB0413K	CC HE50TJYB102K	1000 PF	B
C105	E011F52R2M	CE ECEA1HU2R2E	2.2 UF 50 V	
C213	E25202010M	CTANTAL DA1C010M	1 UF 16V	
C350	E013T2101M	CE ECEA1CK101B	100 UF 16 V	
C351	E013T2470M	CE ECEA1CK470B	47 UF 16 V	
C352	P121T0103J	CP 50F2S103JTV	0.01 UF 50V	
C353	E013T2101M	CE ECEA1CK101B	100 UF 16 V	
C354	E02702222M	CE 16TWSS222M	2200 UF 16V	
C355	E021T5010M	CE 50TWMS010MTA	1 UF 50V	
C356	E021T2100M	CE 16TWMS100MTA	10 UF 16V	
C357	P121T0153K	CP 50F2S153KTV	0.015 UF 50V	
C358	C02TF04H3Z	CC RTHE40SJYF222Z	0.0022 UF	SL
C359	P121T0683K	CP 50F2S683KTV	0.068 UF 50V	
C401	E019F3100M	CE ECEA25W10ZA	10 UF 25V	
C402	P341F4103J	CPP DTW-103J-400V	0.01 UF 400V	
C403	P341F4473J	CPP DTW-473J-400V	0.047 UF 400V	
C404	E027F2102M	CE 16TWSS102MKC	1000 UF 16V	
C405	E027F2102M	CE 16TWSS102MKC	1000 UF 16V	
C406	C02TF0413Z	CC RTHE40SJYF102Z	0.001 UF	F
C407	E013T2330M	CE ECEA1CK330B	33 UF 16 V	
C408	C02FB0513K	CC HM60VJYB102K	1000 PF 500V	B
C409	E252T2010M	CTANTAL DA1C010M	1 UF 16V	
C410	C02TF0413Z	CC RTHE40SJYF102Z	0.001 UF	F
C411	E02702222M	CE 16TWSS222M	2200 UF 16V	
C412	P124T0823K	CP 50F2D823	0.082 UF 50V	
C413	P121F0822K	CP 50F2S822KFC05	0.0082UF 50V	
C414	P121T0273K	CP 50F2S273KTV	0.027 UF 50V	
C415	C02TF0413Z	CC RTHE40SJYF102Z	0.001 UF	F
C416	C02TF0413Z	CC RTHE40SJYF102Z	0.001 UF	F
C417	E252T2010M	CTANTAL DA1C010M	1 UF 16V	
C418	P121T0683K	CP 50F2S683KTV	0.068 UF 50V	
C419	P121F0223K	CP 50F2S223K	0.022 UF 50V	
C420	P12100102K	CP 50F2S102K	0.001 UF 50V	
C421	E021T5010M	CE 50TWMS010MTA	1 UF 50V	
C422	P121T0472K	CP 50F2S472KTV	0.0047UF 50V	
C423	C02TSL4U2K	CC RTHE11SJSL681K	680 PF 50V	SL
C424	P121F0152K	CP 50F2S152K	0.0015UF 50V	
C425	C02TSL4L2K	CC RTHE80SJSL331K	330 PF	SL
C426	C02FSL4K2K	CC HE70TJSL271K	270 PF	SL
C427	E013T2470M	CE ECEA1CK470B	47 UF 16 V	
C428	E025FB4R7M	CE 160TWS4R7M	4.7 UF 160V	
C429	P54100562J	CPL DSR-562J-50V	0.0056UF 50V	
C430	P121T0103J	CP 50F2S103JTV	0.01 UF 50V	
C431	E021T5010M	CE 50TWMS010MTA	1 UF 50V	
C432	P121T0473K	CP 50F2S473KTV	0.047 UF 50V	
C433	P121T0333K	CP 50F2S333KTV	0.033 UF 50V	
C434	C020SL4S2K	CC HE95SJSL561K	560 PF	SL
C435	E021F5010M	CE 50TWMS010MCK	1 UF 50V	
C436	E021T5100M	CE 50TWMS100MTA	10 UF 50V	
C437	E013T2101M	CE ECEA1CK101B	100 UF 16 V	
C438	E025FB100M	CE 160TWS100M	10 UF 160V	
C439	E02E0B2R2M	CE 160NW2R2M	2.2 UF 160V	
C440	P34102104J	CPP DTW-104J-200V	0.1 UF 200V	
C442	C02FF04Q4Z	CC RTHE12SJYF473Z	0.047 UF	
C443	E027F2102M	CE 16TWSS102MKC	1000 UF 16V	
C444	C02TF04H4Z	CC RTHE90SJYF223Z	0.022 UF	ZF
C445	C02TF0414Z	CC RTHE70SJYF103Z	0.01 UF	F
C446	E013T2330M	CE ECEA1CK330B	33 UF 16 V	
C447	E02EF5R47M	CE 50NWR47MKC	0.47 UF 50V	
C448	E02702221M	CE 16TWSS221M	220 UF 16V	
C449	C020SL412K	CC HE50SJSL101K	100 PF	SL
C501	E027F3102M	CE 25TWSS102MKC	1000 UF 25V	
C503	E021T5100M	CE 50TWMS100MTA	10 UF 50V	
C504	E021T5010M	CE 50TWMS010MTA	1 UF 50V	
C506	C020SL4H2J	CC HE70SJSL221J	220 PF	SL
C507	E251T22R2M	CTANTAL DN1C2R2MIS	2.2 UF 16V	

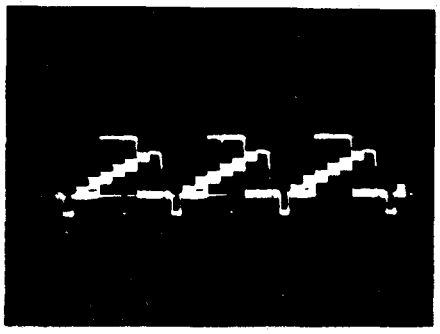
ELECTRICAL REPLACEMENT PARTS LIST

REF.NO	PARTS.NO	DESCRIPTION			
		-RESISTORS-			
R001	R615042R2J	R,FUSE ERQ-14AJ2R2	2.2	OHM	1/4W
R002	R031T6102J	RC RD16ST26-102J	1K	OHM	1/6W
R104	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R105	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R106	R031T6332J	RC RD16ST26-332J	3.3K	OHM	1/6W
R107	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R108	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R109	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R110	R031T6104J	RC RD16ST26-104J	100K	OHM	1/6W
R111	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R112	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R113	R03124273J	RC RD25U-273J	27K	OHM	1/4W
R114	R03124183J	RC RD25U-183J	18K	OHM	1/4W
R115	R03106102J	RC RD16S-102J	1K	OHM	1/6W
R116	R03106102J	RC RD16S-102J	1K	OHM	1/6W
R117	R03106102J	RC RD16S-102J	1K	OHM	1/6W
R118	R03106102J	RC RD16S-102J	1K	OHM	1/6W
R350	R03106151J	RC RD16S-151J	150	OHM	1/6W
R351	R61504220J	R,FUSE ERQ-14AJ220	22	OHM	1/4W
R352	R031T6153J	RC RD16ST26-153J	15K	OHM	1/6W
R354	R031T4680J	RC RD25ST26-680J	68	OHM	1/4W
R355	R03106152J	RC RD16S-152J	1.5K	OHM	1/6W
R401	R012T2010J	RC ERD-S1TJ010T	1	OHM	1/2W
R402	R031T4182J	RC RD25ST26-182J	1.8K	OHM	1/4W
R403	R012T22R7J	RC ERD-S1TJ2R7T	2.7	OHM	1/2W
R404	R012T2331J	RC ERD-S1TJ331T	330	OHM	1/2W
R405	R031T6822J	RC RD16ST26-822J	8.2K	OHM	1/6W
R406	R031T6392J	RC RD16ST26-392J	3.9K	OHM	1/6W
R407	R031T6153J	RC RD16ST26-153J	15K	OHM	1/6W
R408	R63504010J	R,FUSE RF25SJ 010	1	OHM	1/4W
R409	R63504010J	R,FUSE RF25SJ 010	1	OHM	1/4W
R410	R012T2271J	RC ERD-S1TJ271T	270	OHM	1/2W
R411	R012T2271J	RC ERD-S1TJ271T	270	OHM	1/2W
R412	R031T4101J	RC RD25ST26-101J	100	OHM	1/4W
R413	R031T6560J	RC RD16ST26-560J	56	OHM	1/6W
R414	R012T2470J	RC ERD-S1TJ470T	47	OHM	1/2W
R415	R031T6124J	RC RD16ST26-124J	120K	OHM	1/6W
R416	R031T6101J	RC RD16ST26-101J	100	OHM	1/6W
R417	R031T6124J	RC RD16ST26-124J	120K	OHM	1/6W
R418	R61504100J	R,FUSE ERQ-14AJ100	10	OHM	1/4W
R419	R031T6152J	RC RD16ST26-152J	1.5K	OHM	1/6W
R420	R031T6223J	RC RD16ST26-223J	22K	OHM	1/6W
R421	R03106683J	RC RD16S-683J	68K	OHM	1/6W
R422	R031T6102J	RC RD16ST26-102J	1K	OHM	1/6W
R423	R031T6274J	RC RD16ST26-274J	270K	OHM	1/6W
R424	R031T6222J	RC RD16ST26-222J	2.2K	OHM	1/6W
R425	R031T4123J	RC RD25ST26-123J	12K	OHM	1/4W
R426	R031T6154J	RC RD16ST26-154J	150K	OHM	1/6W
R427	R031T6471J	RC RD16ST26-471J	470	OHM	1/6W
R428	R031T6273J	RC RD16ST26-273J	27K	OHM	1/6W
R429	R031T6272J	RC RD16ST26-272J	2.7K	OHM	1/6W
R430	R031T6104J	RC RD16ST26-104J	100K	OHM	1/6W
R432	R031T6273J	RC RD16ST26-273J	27K	OHM	1/6W
R433	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R434	R031T6152J	RC RD16ST26-152J	1.5K	OHM	1/6W
R435	R031T6563J	RC RD16ST26-563J	56K	OHM	1/6W
R436	R031T6182J	RC RD16ST26-182J	1.8K	OHM	1/6W
R437	R031T6822J	RC RD16ST26-822J	8.2K	OHM	1/6W
R438	R031T6822J	RC RD16ST26-822J	8.2K	OHM	1/6W
R439	R031T6272J	RC RD16ST26-272J	2.7K	OHM	1/6W
R440	R031T6153J	RC RD16ST26-153J	15K	OHM	1/6W
R441	R031T6103J	RC RD16ST26-103J	10K	OHM	1/6W
R442	R031T4222J	RC RD25ST26-222J	2.2K	OHM	1/4W
R443	R031T6332J	RC RD16ST26-332J	3.3K	OHM	1/6W
R444	R61504220J	R,FUSE ERQ-14AJ220	22	OHM	1/4W
R445	R031T6473J	RC RD16ST26-473J	47K	OHM	1/6W
R446	R012T2563J	RC ERD-S1TJ563T	56K	OHM	1/2W
R447	R031T4102J	RC RD25ST26-102J	1K	OHM	1/4W
R449	R63504010J	R,FUSE RF25SJ 010	1	OHM	1/4W
R450	R031T6333J	RC RD16ST26-333J	33K	OHM	1/6W
R451	R012T2183J	RC ERD-S1TJ183T	18K	OHM	1/2W
R452	R031T6102J	RC RD16ST26-102J	1K	OHM	1/6W
R455	R031T6822J	RC RD16ST26-822J	8.2K	OHM	1/6W
R456	R031T6561J	RC RD16ST26-561J	560	OHM	1/6W
R457	R031T6273J	RC RD16ST26-273J	27K	OHM	1/6W
R458	R031T4153J	RC RD25ST26-153J	15K	OHM	1/4W
R501	R012T2561J	RC ERD-S1TJ561T	560	OHM	1/2W
R503	R012T2271J	RC ERD-S1TJ271T	270	OHM	1/2W
R504	R031T4222J	RC RD25ST26-222J	2.2K	OHM	1/4W
R505	R512BF120J	R,CEMENT ERF-10HMJ120	12	OHM	10W
R506	R031T6153J	RC RD16ST26-153J	15K	OHM	1/6W
R605	R031T6183J	RC RD16ST26-183J	18K	OHM	1/6W
R607	R031T6153J	RC RD16ST26-153J	15K	OHM	1/6W
R608	R031T6391J	RC RD16ST26-391J	390	OHM	1/6W

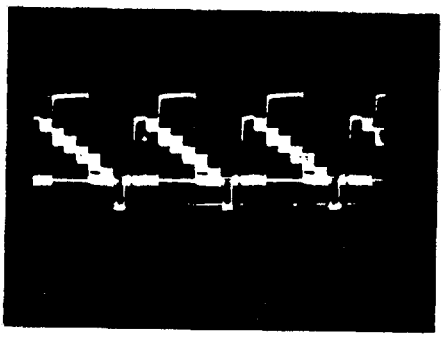
CHASSIS WAVEFORMS



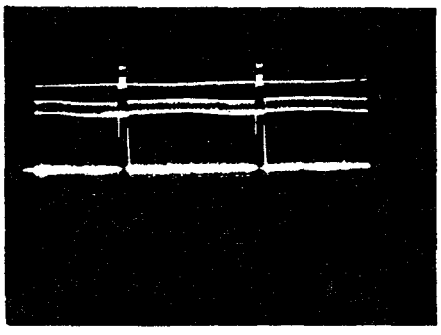
1. 1.8 Vp-p (H)



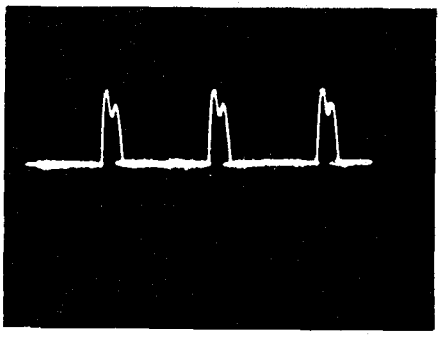
2. 1.2 Vp-p (H)



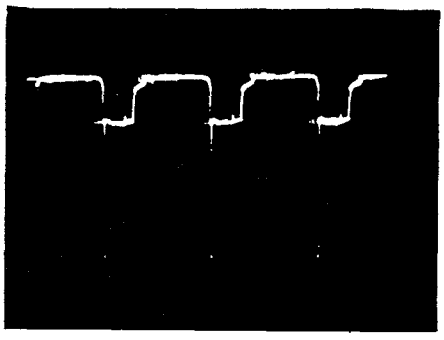
3. 1.3 Vp-p (H)



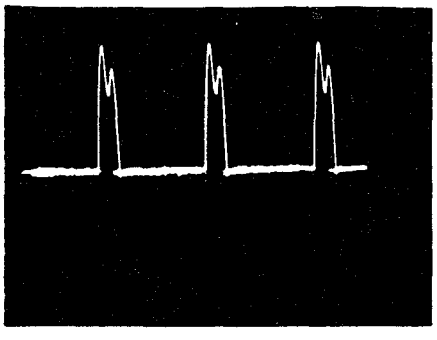
4. 4.4 Vp-p (V)



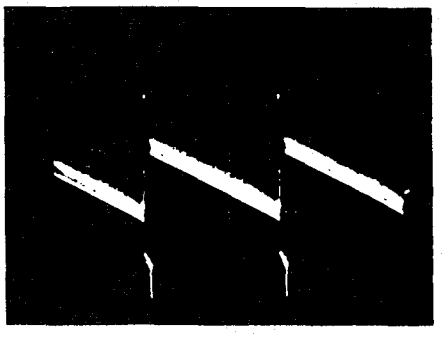
5. 11 Vp-p (H)



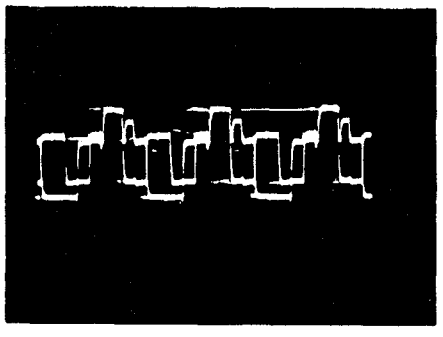
6. 3 Vp-p (H)



7. 80 Vp-p (H)



8. 12 Vp-p (V)



9. 60 Vp-p (H)

M335-05

3-2054

CHASSIS SCHEMATIC DIAGRAM

IC101 AN5700

	1	2	3	4	5	6	7	8	9
VH	28.9	11.4	10.4	5.7	0	0	11.8	11.8	32.7
L	32.3	28.7	2.5	11.8	0	2.6	28.7	31.7	32.7

	G101		G102		G103		G104		G105	
	VL	VH	VL	VH	VL	VH	VL	VH	VL	VH
E	11.9	0	32.7	32.7	7.5	0	0	0	0	0
C	11.7	0	28.3	32.7	0.04	0.02	0	0	32.4	17.6
B	11.1	0	32.7	32.1	0	0.7	0.7	0	0	0.7

TU101 EC-1E-0104

CCD003 HXC0492 -10-010

BU TU VH ASC VL AFT BM IF

VIF AMP · VIDEO AMP · RF AGC AMP · IF AGC AMP · AFT · DET · LA7506

LIMITER · L.P.F · DET · AUDIO AMP · ATT · UPC1382C

IC101 AN5700 VHF BAND SWITCHER

POSITION DISCRIMI NATE VOL · DRIVE · AUXILIAR Y SWITCH · BS SWITCH · VOL. SW. · VOL. SW.

SW701-2 AFT SW ON OFF

SW701-3 TV/VIDEO SW

SW701-1 AUTO COLOR SW

Q101 2SA733 · Q102 2SA733 · Q103 2SC945 · Q104 2SC945 · Q105 2SC945

Q701 2SC945 · Q702 2SC945 · Q703 2SC2274 · Q704 2SC945 · Q801 2SC945 · Q802 2SC945 · Q803 2SC945

VIF KILLER · VIDEO BUFFER · VIDEO AMP · SUB COLOR · SUB CONT · SUB BRIGHT · CONTRAST · BRIGHT · COLOR · AUTO COLOR

TUNING VOL. · VR101 EVH-9MA091B15 100KB · CD101 8M140718 · CP101 2-171825-4

CD007 8319025A-1 · CD007 8319025A-2 · CD010 8312138A · CD009 8312137A

EARPHONE JACK J950 HS-J0600 -01-020

SPEAKER SP350 EAS-6P01AC 32 OHM

PF350 DSS310-55D223S

IC350 TA7313AP · CURRENT SOURCE · AMP · SOUND AMP

CD001 8M1C040A

TP1 TP2 TP4 TP6 TP7 TP9 TP10 TP11

J701 890PJD04V0 · SW701 E98 -621518

J701-1 J701-2 J701-3 J701-4

J950 J951 J952 J953 J954 J955 J956 J957 J958 J959 J960 J961 J962 J963 J964 J965 J966 J967 J968 J969 J970 J971 J972 J973 J974 J975 J976 J977 J978 J979 J980 J981 J982 J983 J984 J985 J986 J987 J988 J989 J990 J991 J992 J993 J994 J995 J996 J997 J998 J999

VRS04 ‡ EVU66ABA0010

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ATTENTION : LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLES DECRITES DANS LA NOMENCLATURE DES PIECES.

PCB001 TM0050C

DL601 EFDEN645A01A · DL

XS01 4.4MH-Z

IC501 AN5622CK · ACC AMP · I-HDL DRIVE · SAMPLING PHASE DET · KILLER ACC DET · H/2 SAMPLING · DSC · DEMOND · DL MATRIX KILLER BLANKER · FF

PF801 LC973A2 B.P.F

DL610 ELT-102466

IC502 AN5612 · COLOR DIFF. AMP · SATURAT COLOR CONT. · CLAMP · CLAMP PULSE · CRT CONT. · RGB MAT BLK

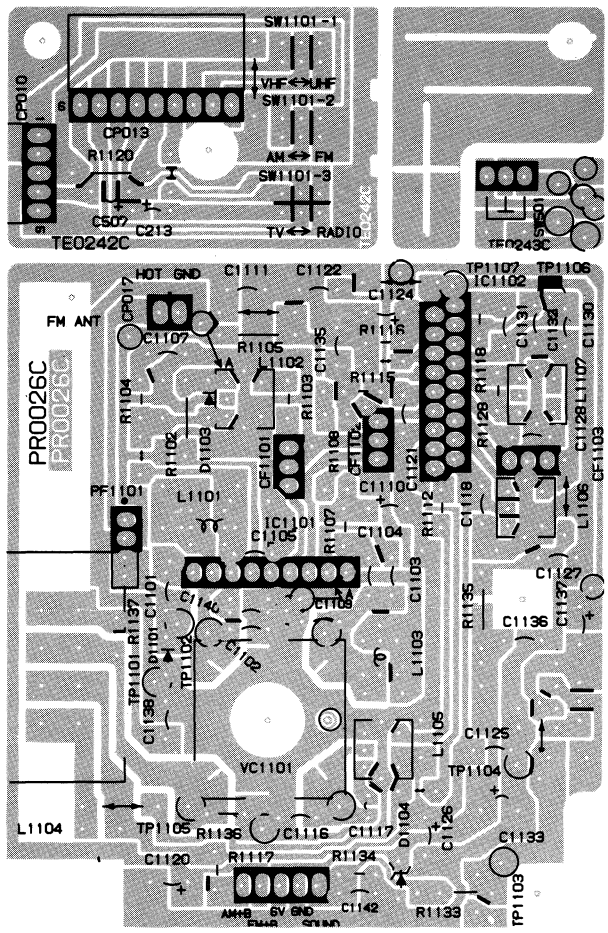
SERVISE SW. SW802 SS-009-7H NORMAL SER

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

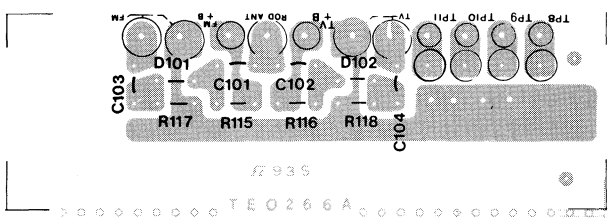
CHASSIS SCHEMATIC DIAGRAM

M335-05
1-4004

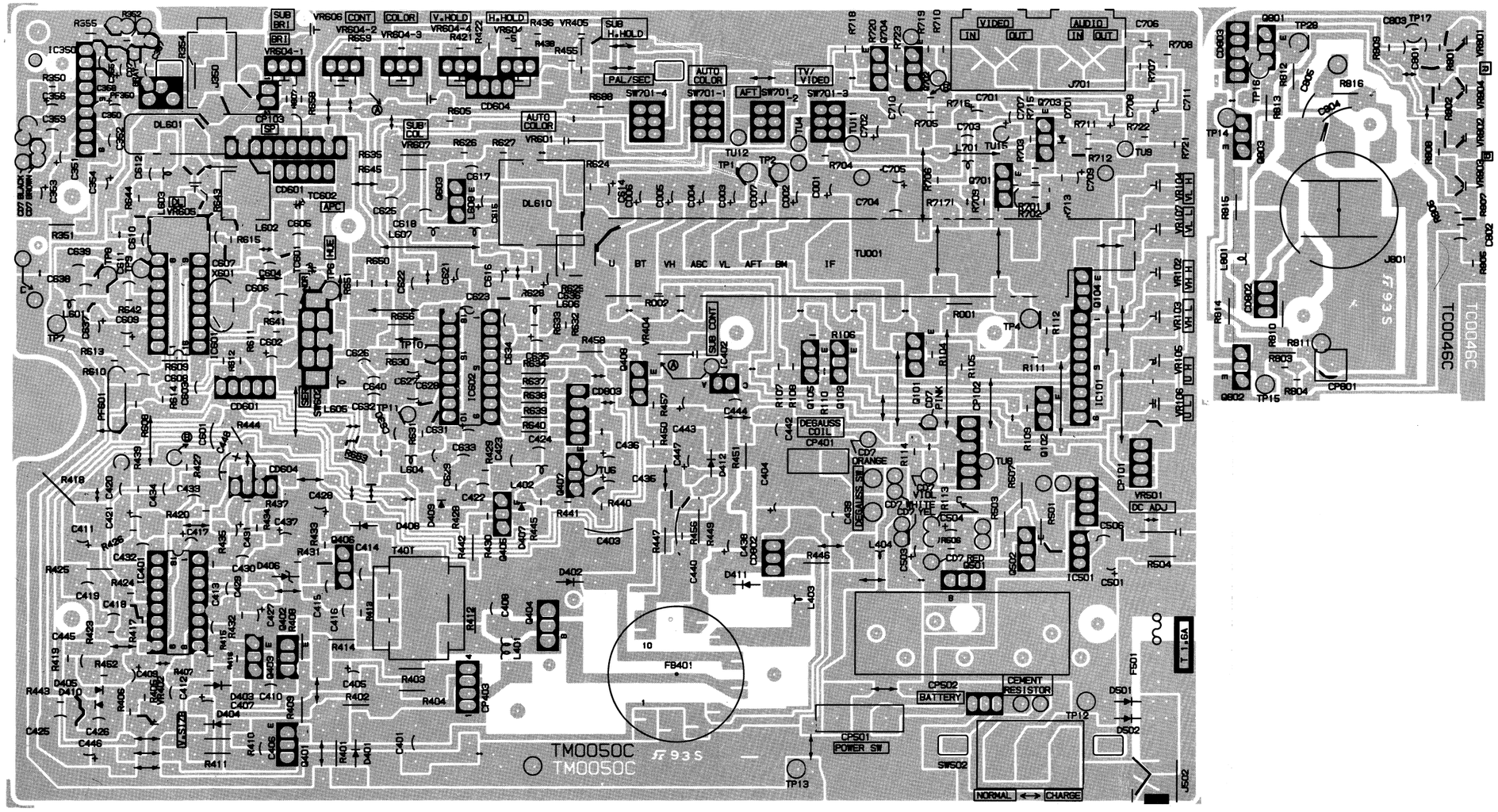
RADIO P.C. BOARD



ANTENNA P.C. BOARD



MAIN P.C. BOARD



MISS PRINT

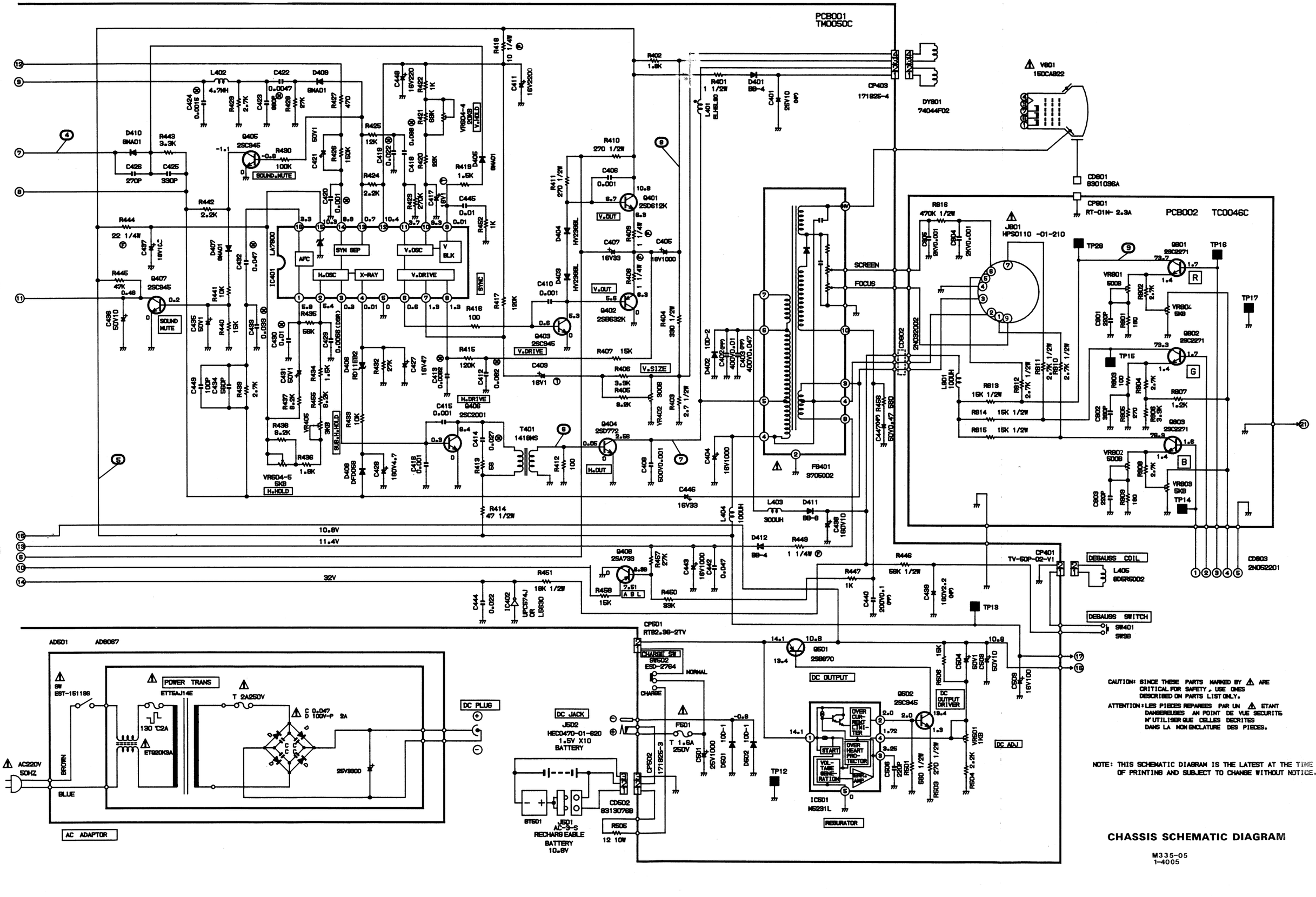
	REF.NO. (WRONG)	REF.NO. (CORRECT)
PCB001	CP102	DELETE
"	CP103	DELETE
"	CD601	DELETE
PCB005	CP010	CP008
"	CP013	CP007

SYMBLE LIST

RESISTOR	
SEMI-FIXED RESISTOR	
CAPACITOR	
JUMPER	

MAIN P.C. BOARD

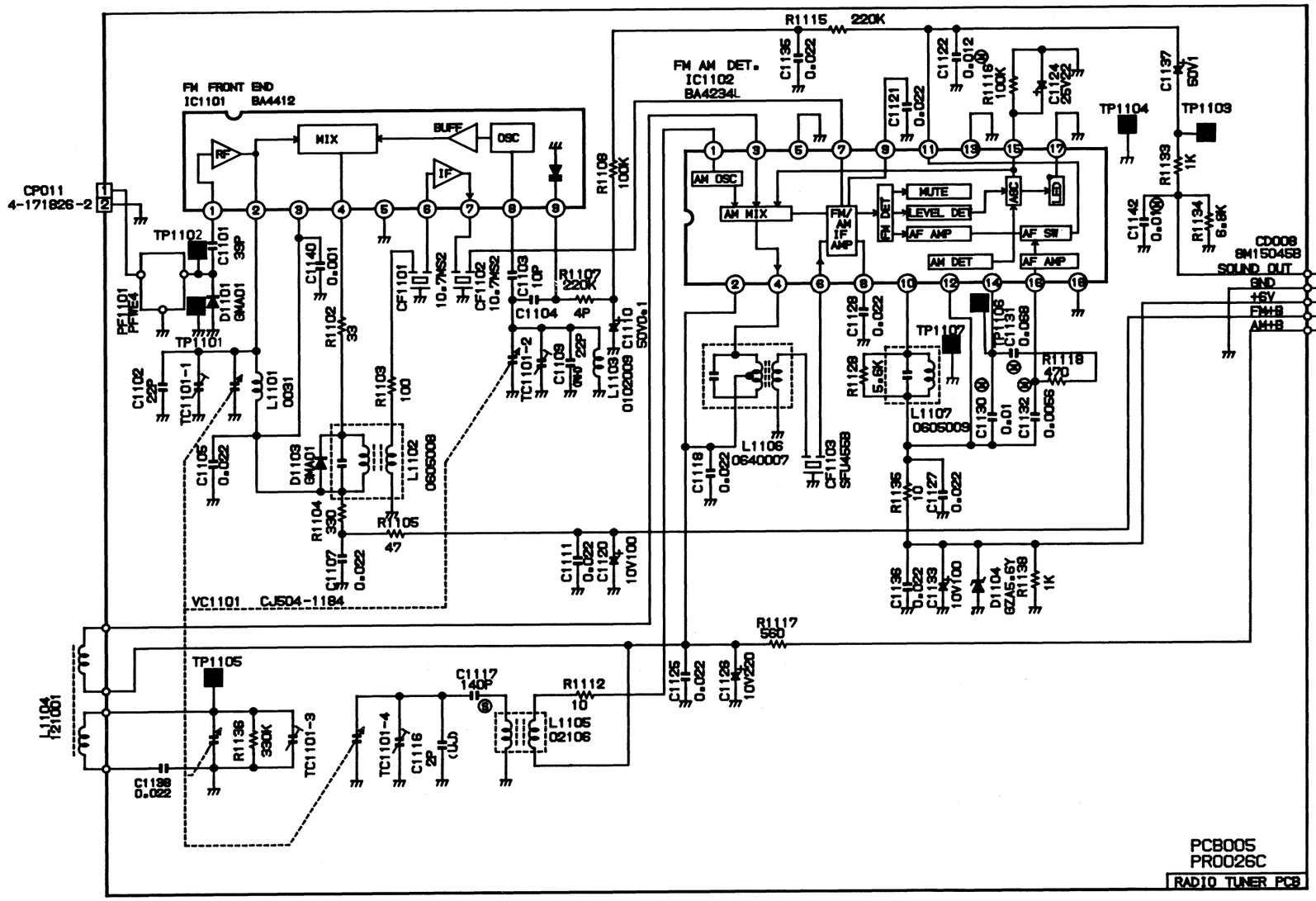
CHASSIS SCHEMATIC DIAGRAM



CHASSIS SCHEMATIC DIAGRAM

M335-05
1-4005

CHASSIS SCHEMATIC DIAGRAM



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CHASSIS SCHEMATIC DIAGRAM

M335-05
1-4006